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The London
Medical Record

A MONTHLY REVIEW OF THE

Progress of the Medical Sciences and o
Subjects relating to Public Health

EDITED BY ERNEST HART

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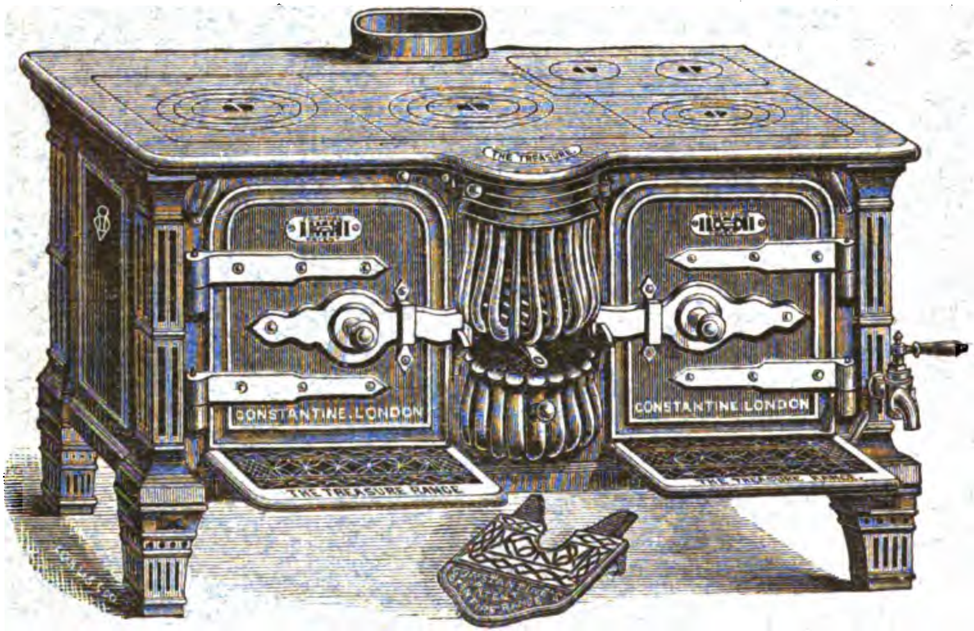

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ARTICLE 3542.

NOBEL ON A NEW CHEMICAL PROPERTY OF ACETONE AND ALLIED SUBSTANCES, AND ITS EMPLOYMENT IN ACETONURIA.

L. NOBEL says (*Archiv für Exp. Path.*, Band xviii., Heft 1) that it has been known for long that acetone with iodine and liquor potassæ or sodæ forms iodoform, but so many substances give this reaction that its use has led to false and conflicting conclusions. Gunning has discovered two new properties of acetone—1. that acetone with tincture of iodine and liquor ammoniæ gives iodoform, but this is sufficiently explained by the presence of alcohol in the tincture; and 2. that freshly precipitated oxide of mercury (H_gO) in the presence of an alkali is soluble in acetone.

To employ the latter test, precipitate perchloride of mercury with an alcoholic solution of caustic potash till the mixture is strongly alkaline; shake it in a test-tube with the fluid containing acetone, and filter. The mercuric oxide may be recovered from the filtrate by chloride of tin or sulphide of ammonium, the latter being allowed to run gently on to the surface of the fluid, a dark-brown ring of sulphide of mercury being formed at the point of contact of the two fluids.

Nobel, in the course of some experiments on the presence of kreatinine in diabetic urine, discovered another test for acetone. Nitro-prusside of soda and liquor ammoniæ give no colour-change when acetone is present, but gradually, more quickly if shaken with air or by adding a few drops of a strong acid, the mixture, however, remaining alkaline, the fluid becomes rose-red, and finally violet. This colour disappears on heating, but returns on cooling; heating with acids converts it into a greenish-blue; if iodine be added, iodoform is formed. This colour-reaction is *peculiar* to acetone, and distinguishes it from acid fluids containing sulphuretted hydrogen, which give the same colour *immediately*. The following table shows the reactions of these substances with this test.

	Acetone.	Ethyl-diacetic Acid.	Aldehyde.	Kreatinine.
Nitro-prusside of soda + KOH (N_4OH).	Ruby red.[*]	Id.[*]	Id.[*]	Id.[†]
Nitro-prusside of soda + acids.	Violet.	Deeper colour.	No alteration in colour.[‡]	No alteration in colour.[‡]
Nitro-prusside of soda + NH_3.	Gradually red-violet.	Ruby red.	No colour reaction.	No colour reaction.

[*] Becomes gradually straw-yellow.

[†] Becomes quickly straw-yellow.

[‡] The red and yellow colour on heating with acids give with aldehyde a greenish blue, but not with kreatinine.

He criticises the work of Von Jaksch, pointing out that alcohol gives the same reaction as acetone, and that he has not taken the trouble to include this source of error. Seifert and Mackenzie have written of acetonuria, as if that and the ferric chloride reaction were identical.

In his own experiments he has been careful to control his results by three tests; 1. Nitro-prusside of soda, caustic potash, and acetic acid, which gives a red violet changing to greenish blue on heating; 2. Iodine and ammonia; 3. Mercuric oxide reaction.

He found that his own urine contained no acetone after abstention from alcohol for eight days, but two or three glasses of cognac caused the reaction, which, however, gradually disappeared on omitting its use. The urine of two other persons who took a smaller quantity of diluted alcohol contained no acetone. He found that there is not a normal acetonuria, but that normal urine contains a body which gives iodoform but is not acetone. Febrile urine often contains acetone, but this is not dependent upon the fever process. There was no relation between the ferric chloride reaction and the presence of acetone.

A case of gastric cancer excreted urine giving a decided ferric chloride reaction, but no acetone. After enemata of sugar and peptone, acetone appeared in the urine. On substituting starch for sugar the acetone diminished. It was probably formed from the sugar in the rectum. After death, no acetone was found in the blood.

In the urine of phthisis and nephritis he found only traces of acetone; but it is probable, though not certain, that these patients were taking alcohol. In three cases of cancer no acetone was found.

His experiments in diabetes show the following facts.

1. There are cases of diabetes in which an irregular acetonuria occurs, *e.g.* present one day and not a trace the next.
2. The intensity of the acetonuria is absolutely independent of the ferric chloride reaction or of the amount of sugar in the urine.
3. He has observed cases of diabetes, in which the urine contained large quantities of acetone without any bad symptoms occurring; and he has observed the opposite of this.
4. Finally, diabetic urine, as Stokvis has pointed out, which gives the ferric chloride reaction, very often contains albumen.

He failed to produce any other effects than intoxication in dogs by introducing 25 cubic centimètres of acetone into their stomachs, and their urine contained no acetone and gave no ferric chloride reaction.

He thinks the presence of albuminuria suggests, as Stokvis thinks, that uræmia may account for these sudden deaths in diabetes.

He recalls the observations of Brieger,[*] that a poisonous substance is formed in putrefying albuminous bodies, which causes a paralytic comatose condition and death, when injected into frogs and rabbits.

Gerhardt believed that ethyl-diacetic acid gave the ferric chloride reaction in diabetic urine, but Fleischer, Tollens, and Deichmuller have rightly denied its presence in diabetic urine, and indicated the probability that the reaction was due to aceto-acetic acid, which Von Jaksch has shown to be present.

Nobel has examined a large number of normal urines, and found no ethyl-diacetic acid; moreover, when this substance is added to normal urine in quantity sufficient to give the ferric chloride reaction, such urine always gives the acetone reaction with nitro-prusside of soda and liquor ammoniæ. But, he asks, is Jaksch right in thinking that the ferric chloride reaction is always dependent upon the presence of aceto-acetic acid? The reddish-brown colour with ferric chloride is also given by acetic, formic, and sulphocyanogen compounds, all of which may occur in the urine. If normal urine be mixed with these compounds, it gives a reddish-brown colour with ferric chloride, which disappears on adding sulphuric acid (10 per cent.), and reappears on neutralisation. If the urine be shaken with ether, this body is not taken up. On heating, the colour does not disappear, as sometimes is the case in pathological urines. This is the only distinguishing point; and when the red colour in pathological urine does not for the most part disappear on heating, as is often the case, the presence of aceto-acetic acid must be regarded as doubtful. It is therefore incorrect to conclude, as Seifert and Mackenzie have done, that the ferric chloride reaction indicates the presence of acetone. Nobel has never succeeded in obtaining acetone from the ethereal extract of urine giving the ferric chloride reaction.

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[*] *Zeitschr. für Phys. Chem*, Band vii.

ROBERT SAUNDBY, M.D.

ARTICLE 3543.

SEPPILLI ON EPILEPSY.

DR. G. SEPPILLI, in the *Rivista Sperimentale di Freniatria* (Fasc. i. and ii., 1884), gives a very able review of current doctrines of epilepsy, and of the facts brought forward by various observers in support of the different views. A few points will be given here in abstract.

The disposition to epilepsy is not merely different amongst different classes of animals, and even amongst different animals of the same class; but it is different in the same animal at different times according to various circumstances. Amongst the various circumstances that affect the excitability of the cerebral cortex, the most important are age, drugs, and morbid conditions. In regard to age, Soltmann and Tarchanoff found that in newly born cats, dogs, and rabbits the brain is altogether inexcitable. In a dog 13 days old, Albertoni could not provoke epileptic convulsions or movements by faradisation of the brain; whilst in a dog 22 days old the excitement of the right hemisphere brought on a complete epileptic attack. Some observers hold also that epilepsy is more easily produced in young than in adult animals. As to drugs, anæsthetics have been found by Luciani and Tamburini, and also by Hitzig, to abolish completely the cortical excitability. Bromide of potassium and chloral tend in the same direction; as do also large doses of alcohol, of ether, or of morphia. The excitability of the cortex to the electric stimuli is increased by strychnia, by atropia (Albertoni and Unverricht), cinchonidine, picrotoxine, and absinthe. Morbid conditions also affect the tendency to epileptic convulsions. Intense cold gave different results to different observers. François-Franck and Pitres found that, when the cerebral cortex was etherised for a few minutes, the tissues being protected with a thin sheet of caoutchouc, convulsions could not be excited. Marcacci, not protecting the cortex from the direct contact of the pulverised ether, did not find the cortical excitability altered. Unverricht found that sometimes cerebral excitability persisted in spite of enormous lowering of temperature, but in most cases it was completely abolished. Anæmia, if great, generally diminished or abolished the excitability. The tying of all the arteries going to the brain, according to Minkowsky, sometimes did not alter the electric excitability of the cortex and sometimes diminishes it. Orschansky found that the removal (by the femoral artery) of one-seventh of the entire mass of blood did not modify the excitability. The loss of a greater quantity up to one-fifth increases the excitability. Beyond this point the excitability diminishes; disappearing altogether when about three-fifths to two-thirds of the entire blood mass have been removed. Asphyxia diminishes the excitability,; encephalitis, if not so severe as to disorganise the tissues, increases it.

The most interesting questions relate to the seat and to the pathology of the nervous discharge. Hitzig, Fritsch, Hughlings Jackson, Ferrier, Albertoni, Luciani, and others contributed each in his own way to establish the doctrine that epileptic convulsions depend upon a cortical discharge. Nothnagel, on the contrary, finding in the medulla oblongata a centre which, when stimulated, gave rise to general convulsions, held that this was the seat of the nervous discharge. The various divergences of opinion amongst the holders of the cortical theory as to the portion of the cortex affected, and as to whether the cortex is exclusively involved, would make difficult in a concise exposition the linking of each argument with its supporters, so that only the gist of the case as it stands at present can be stated here.

The objections to Nothnagel's convulsion-centre as the seat of nervous discharge in epilepsy, are that loss of consciousness does not accompany the fits, and that the convulsions are general and do not spread, as do epileptic convulsions.

As to the localisation of the discharge in the motor portion of the cortex, the convulsion always begins in the muscles corresponding to the motor portion stimulated; and the spread of the muscular disorder corresponds to the relative position of the cortical motor centres. Some have held that the discharge may take place in the sensory or other region of the cortex, because stimulation of such portions will also give rise to the epileptic seizure. This, however, is due to the conduction of the stimulus to the psycho-motor portion; for if the psycho-motor portion is removed there is no response to the stimulus. On the other hand, the removal of the sensory portion of the cortex does not prevent the motor portion from responding. Another difficulty in the way of ascribing the discharge exclusively to the motor area is, that even after this area has been removed on one side stimulation of the sound motor area gives rise to epileptic convulsions, which then spread to the side corresponding to the injured cortex. The convulsions, however, corresponding to the injured side of the brain are weak; and may be due to diffusion of the stimulus to the inferior ganglia. An observation of Unverricht lends support to this view. Unverricht noticed that, when the convulsions were confined to one side, the left, for example, the limbs of the opposite side were either extended tonically or were faintly convulsed; and the order of seizure was identical and synchronous on both sides. When the convulsions extended to the other side, corresponding secondary tonic extension or faint convulsions appeared on the side originally convulsed. Against the doctrine that the bilateralness of the convulsions from unilateral stimulation of the cortex is due to the passing of the stimulus to the opposite cortex, is objected the fact that section of the corpus callosum does not prevent the convulsion from becoming general. This objection, however, assumes as an anatomical fact what has not yet been demonstrated, namely, that the corpus callosum is the only communication between the cortical centres of the two hemispheres.

Dr. Seppilli relates a remarkable case that came under his own observation, which it requires some ingenuity to keep from directly contradicting the cortical theory. A woman 30 years old, epileptic from the age of 12, when she appears to have had a cerebral illness, had left hemi-atrophy of the body. The left arm was incompletely paralysed and contracted, the left leg paretic. The fits always commenced in the left arm, and spread over the whole of the corresponding side, sometimes becoming general. The patient was for several months under observation, and she died of diffuse miliary tuberculosis. At the necropsy, the motor zone of the limbs on the right side was found completely destroyed. The two ascending convolutions, the foot of each of the three frontal, the foot of each of the two parietal convolutions, and the paracentral lobule, were replaced by fibrous tissue and small serous cavities. This case is explained by the hypothesis of the compensatory functions of the brain. Luciani and Tamburini, in order to explain the disappearance of paralysis after the destruction of the motor area, held that the basilar ganglia had a psycho-motor function, differing only in degree from that of the cortex. On the destruction of the cortex, however, the basilar ganglia, as their functions develop, replace the cortex, and may also probably acquire an epileptigenous property.

Of the many other points of interest only one more can be mentioned, and that is the order of diffusion of the convulsive seizure. Unverricht appears to have shown that whatever the order of invasion, upwards or downwards, on the side first attacked, the order is invariably ascending on the side last seized. In the *status epilepticus* the attacks are usually oscillating, each new attack commencing in the muscles last convulsed. Sometimes each successive attack begins in the same group of muscles. This would indicate a persistent excitement in one spot of the cortex; whilst the oscillating form would point to a diffuse disturbance of equilibrium amongst the ganglion-cells.

WILLIAM R. HUGGARD, M.D.

ARTICLE 3544.

THE COLLECTION OF BRAZILIAN DRUGS AT THE VIENNA EXHIBITION.

ALTHOUGH this collection of drugs was mentioned by name in the report upon the International Pharmaceutical Exhibition at Vienna, which appeared in the *Pharmaceutical Journal* last year, a description of the individual plants could not then be given.

The *Zeitschrift des Allgemeinen Œstereichische Apotheker-Vereines* now enables us (*Pharmaceutical Journal*, Oct. 25, 1884), to make up for this deficiency by quoting a series of notes upon the uses, &c., of these drugs. Very little is known about some of them in this country; and, as South American drugs are frequently sent over to England, some of the information which has been furnished to the above may at a future time be found useful for reference. These notes are furnished to the above journal by Mr. Gustave Peckolt, apothecary at Rio Janeiro, son of the well-known botanist, Dr. Theodor Peckolt.

CARQUEGA AMARGOSA.—The leaves of *Baccharis genistelloides*, Pers. (*Compositæ*).—The powerfully bitter leaves serve as a substitute for wormwood. A tea prepared from these leaves is much used for indigestion and diarrhœa, twelve grammes of the leaves being infused in 600 grammes of water and taken in doses of a wineglassful. An aqueous extract is used in conjunction with salts of iron for debility and anæmia; a spirituous extract in doses of 2 grammes for liver-disease, and the bitter resin every two hours in intermittent fever between the attacks.

The fresh leaves analysed by Dr. Theodor Peckolt were found to contain in 1,000 parts 1·347 per cent. of a volatile oil, and 17·948 of a dark green soft resin soluble in ether, 11·218 of a dark green hard acid resin, insoluble in ether, 3·236 of a brown bitter resin, 8·413 of a tannin giving a green precipitate with iron salts; also wax, fat, &c. The fresh leaves afforded 10 per cent. of watery extract, and 9 per cent. of a spirituous one.

The leaves are said to be exported in considerable quantity to France for preparing a secret remedy or some other purpose. The idea seems to suggest itself that this may be used as an ingredient of absinthe.

JABORANDI.—Mr. Peckolt remarks that various leaves of other rutaceous plants, more especially of the genus *Xanthoxylum*, are exported under this name by ignorant collectors (see *Pharm. Journ.*, Oct. 20, 1883, p. 476; and *Pharm. Centralhalle*, No. 37, 1875).

JURUMBEBA (*Solanum insidiosum*, Mart).—The leaves and unripe fruit are much used at Rio in vesical catarrh and liver-disease. The drug is taken in the form of wine or pills, and a plaster made with the extract is also applied externally. The dose of the leaves is 2 grammes in 500 grammes of infusion, a wineglassful being taken four times a day; of the extract 0·055 centigramme in the form of a pill four times daily.

MANGUEIRA.—The flowers of the mango, *Mangifera indica*, L. (*Anacardiaceæ*), are used either in the form of tea or of powder for catarrh of the bladder. The powder is also used in the form of fumigation against mosquitoes.

ROSA DE ÇABOCLO.—The freshly expressed juice of the Indian rose plant, *Langsdorffia hypogæa*, Mart. (*Balanophoraceæ*), is used as an aphrodisiac, and the flower-buds are eaten by the Indians.

On analysis, 1,000 grammes of the fresh roots of the plant yielded 9·015 grammes of a soft bitter resin, and 7·768 grammes of a yellow resinous acid soluble in ether, 3·137 per cent. of a brown resin insoluble in ether, 4·018 per cent. of a crystallised vegetable acid, 32·100 grammes of a wax giving off a vanilla odour when heated, as does also the extract of the root. The vegetable acid does not correspond in chemical reactions with any known acid and seems to deserve further investigation.

CIPO DE CHUMBO (*Cuscuta racemosa*, Mart.—The expressed juice of the fresh plant is used in menorrhagia and catarrhal affections. The decoction is taken internally and used externally for crusta lactea and as a gargle for inflammation of the throat. The powdered herb is said to be useful as a vulnerary.

CASTANHA DE CERA (*Pachira*, Sp.).—The leaves possess mucilaginous properties. The seeds contain 25·385 per cent. of a colourless fat melting at 77° F. and are edible. The tree affords a strong bast.

CRUA or MELAO DO BABOCLO (*Sicana odorifera*, Naud., *Cucurbitaceæ*).—In the ripe state the fruit has a very pleasant odour. The juice is used as a refrigerant and antifibrile remedy, and the seeds are regarded as a powerful emmenagogue.

FAVA CONTRA (*Canavalia gladiata*, DC. *Leguminosæ*).—The seeds are used as a remedy against the bites of serpents. The seeds are pounded with rum, the liquid pressed out and drunk, and the expressed portion applied to the bitten part.

FRUCTO DE ABUTUA (*Abuta rufescens*, Aubl.).—The root is a considerable article of export as Pareira brava; it would be interesting to know for what purpose it is used, as it is impossible that the thousands of kilogrammes exported should be used for medicinal purposes.

FRUCTO DE ARRADIABO (*Cnidoscalus neglectus*, Pohl. *Euphorbiaceæ*).—In Pernambuco, the freshly bruised leaves are used as a poultice for carbuncle. The leaves and husk of the fruit are furnished with glandular hairs which sting most virulently, causing blisters where they touch the skin and giving rise to fever. The seeds contain 31·5 per cent. of a purgative oil.

FRUCTOS DE BARBATIMAO (*Stryphnodendron polyphyllum*, Mart. *Leguminosæ*).—The pods contain soft sweet pulp, with a styptic after-taste, and are used for hæmoptysis. The fresh pods were found by Dr. T. Peckolt to contain 7·9 per cent., and the dried pods 17·584 per cent. of tannin, which gives a black precipitate with ferric salts.

FRUCTOS DE BUCHUIHA (*Luffa operculata*, Cogn., *Cucurbitaceæ*).—The fruits are as drastic in their action as colocynth, and are used in dropsy, amenorrhœa, liver-complaints, and tropical anæmia (opilaco). For dropsy, a fruit is boiled for some time, strained, and beaten until cold into a froth like white of egg, and a tablespoonful is given every half hour until vomiting or purging take place. In the northern provinces of Brazil it is used indiscriminately by the common people in all diseases, and, consequently, is sometimes used with bad results. For general use, a bottle is half filled with the sliced fibrous part of the fruit, the bottle filled with rum and allowed to stand a day in the sun. In any indisposition a small dram glassful is taken, which usually produces six to eight evacuations.

FRUCTOS DE COPAIBA (*Copaifera nitida*, Mart.)—The pods are used only by herbalists in the treatment of gonorrhœa, but with success. It is noteworthy that the pods contain 19·568 per cent. of a soft resin, having the odour of balsam of copaiba, and that the odour of copaiba is found only in the wood, bark, and pods of the tree, the black seeds containing 3·558 per cent. of a fat oil, having the odour of tonka bean, and the orange-yellow arillus surrounding the seed being free from odour.

FRUCTO DE CUJETE (*Crescentia Cujete*, L.)—The pulp of the unripe fruit is beaten with sugar and taken in tea-spoonful doses as a remedy for catarrh and bilious fever, and the expressed juice in doses of 8 to 15 grammes in the treatment of convulsions. In the province of Pernambuco, the full-grown unripe fruit is heated over a fire until the shell begins to crack, and the pulp is then removed, or squeezed out while hot, and given in doses of two spoonfuls for traumatic tetanus. The herbalists mix the heated mass with tapioca meal and make it into pills, or rather boluses, which they give for elephantiasis. Externally, it is applied to ruptures, and as a poultice for headache, bruises, scalds, and to ripen boils. The seeds are also used by the common people as a tænifuge. The not pleasant pulp of the ripe fruit is eaten by negroes and Indians without unpleasant results. With the juice of the ripe fruit a cough linctus is prepared. The pulp, on examination, was found to contain malic, tartaric, and crescentinic acids, a tannin giving a green colour with salts of iron, a bitter substance, brown resin, &c.; a kilogramme of the fresh, unripe fruit afforded 292·700 grammes of juice, which yielded 1·690 grammes of crescentinic acid crystallised in four-sided prisms from the alcoholic solution. The seeds contain an acrid, bitter, fat oil.

JACA (*Thevetia neriifolia*, Juss. *Apocynaceæ*).—One kernel eaten, or pounded with milk and drunk, acts as a purgative in about a quarter of an hour; sometimes also producing vomiting. The usual dose as a purgative is half a seed in rheumatism and dropsy. It is also a popular remedy for snake-bites. Two seeds are beaten with a beer-glassful of rum and strained, and a tumblerful taken every half-hour or hour, and the residue applied to the wound. It is now, however, becoming supplanted by the subcutaneous injection of permanganate of potash. Notwithstanding that the activity of this antidote is doubted in Europe, Mr. Peckolt says that in Brazil there is almost daily proof of its distinct efficacy.

FRUCTO DE PAPAGAIO (*Mahonia* sp. ?).—In the province of Minas this fruit is called 'Moribo,' and in San Paulo 'Moluro.' It is a popular remedy for gonorrhœa. Parrots are very fond of the fruit.

FRUCTO DE PEROBA (*Aspidosperma peroba*, Tr. Allen. *Apocynaceæ*).—The seeds are used as a purgative.

LARANJAS DE MATO (*Gardenia suaveolens*, Vell. *Cinchonaceæ*).—The bitter root-bark is used as a tonic in intermittent fever. The fruit is roasted in ashes and eaten by the Indians.

BAUNILHA DO RIO (*Vanilla palmarum*, Lindl. *Orchidaceæ*).—The pods are collected in the province of Rio de Janeiro, in abundance on the banks of the river Parahyba, and would by proper treatment afford a good article of export. They contain 1·03 per cent. of vanillin.

CASCA DE ANGRIO VERMELHO (*Piptædenia gida*, Benth. *Mimoseæ*).—Much used as an alterative and blood purifier, being given in decoction made in the proportions of 60 grammes to 500 grammes of water, and strained. Externally it is used in the form of decoction or fluid extract as an application for œdema of the feet and chronic ulcers. The wood of the tree is valued as timber, and the sawdust is used for preparing a fluid extract of syrupy consistence which is used as a vulnerary. It was used by Dr. Peckolt in a hospital at Rio de Janeiro for wounds, and in three days the pus had nearly disappeared, and in twenty days the wounds were perfectly healed. The sawdust was found to contain 5·128 per cent. of a soft resin soluble in ether, and 20·512 per cent. of tannin. A tincture of the leaves is also used for bruises and cuts.

CASCA DE BARBATIMAO (*Stryphnodendron polyphyllum*, Mart. *Mimoseæ*).—The bark is frequently exported to Europe as *Cortex adstringens*. According to Dr. Peixoto, the decoction of the fresh bark, or the powder in the form of a poultice, is useful for unhealthy sores, and as an injection for leucorrhœa or passive hæmorrhage. It is used in the form of snuff for epistaxis, and the extract in the form of plaster for rupture. In cases of *post partum* hæmorrhage a decoction is made of 20 grammes of the bark to 240 of water, the decoction strained, and 4 grammes of acetic ether added; of this mixture a tablespoonful is given every hour. Dr. T. Peckolt found in the fresh bark 0·792, and in the fresh leaves 0·528 per cent. of tannin which gives a green precipitate with salts of iron.

Casca de Cedro Vermelho, *Cedrela vellosiana*, Rœm.—According to some writers on Brazilian drugs the bark possesses emetic properties, a statement that has also been copied in some French works. According to Dr. T. Peckolt's investigations in the hospital of Rio Janeiro, the statement is not supported by facts. He gave the decoction in the dose of 40 grammes of the bark to 240 grammes of water without the least symptom of nausea being produced, and in one patient suffering from dysentery, in whose case an emetic was indicated, the decoction cured the patient. The fluid extract is given with success in diarrhœa, a tablespoonful being given every three hours of a mixture of 8 grammes of the fluid extract in 120 of water. The fresh bark was found to yield only 0·03 per cent. of tannin, which gives a black precipitate with iron salts. Ten kilogrammes of the dried bark yielded 1·976 grammes of a volatile oil, having the odour of the wood.

Casca de Raiz de Cipo Suma (*Anchietea salutaris*, St. Hil. *Violaceæ*).—The root bark is officinal, and is much prized as a remedy for syphilis and herpetic eruptions. It is also used for whooping-cough in the form of syrup, 4 grammes of tincture mixed with 30 of simple syrup. The decoction is prepared of the strength of 30 parts of the root to 500 of water; the powder is taken in doses of 2 to 6 grammes three times a day.*

Casca de Guaranhem (*Lucuma glycyphlœum*, Eichl. *Sapotaceæ*).—Dr. Peckolt found in monesia bark 22 per mille of monesia—tannic acid—which gives a black coloration of salts, 6·960 of gallic acid, 2·800 of monesin, an acrid amorphous body, 0·090 of lucumin, a body crystallising in silky needles, 1·130 of a bitter substance and 15,000 of glycyrrhizin, tartaric and citric acids, wax, &c.

The dose of the decoction is made from 30 grammes of the bark boiled in 500 grammes of water. Of the extract (known as monesia), the dose is 0·6 to 1·5 gramme, taken during the day. The tincture is prepared from 1 part of the bark and 5 of spirit of wine.

Casca de Mulungu (*Erythrina Mulungu*, Benth. *Leguminosæ*).—A largely used and much valued remedy. In small doses it acts as an anodyne and sedative; in larger doses it produces sleep without causing excitement; it is also used in cases of hypertrophy. It is added to baths to relieve rheumatism.

This drug has no doubt an important future, and it is well worthy of further examination from a physiological and a therapeutic point of view. The active principle has not yet been obtained in a definite form, although a yellow odourless resin and a strongly narcotic extract of a disagreeable bitter taste, tannin, and nitrate of potash have been prepared from the bark.

Casca Paratudo (*Hortia arborea*, Engl. *Rutaceæ*).—The bark is an excellent tonic; it has an agreeable aromatic odour, a mild bitter flavour with a burning after-taste, due to the presence of volatile oil. It is a favourite tonic for weak digestion. The infusion is used in zymotic fevers, especially when skin eruptions are present.

The dose of the powdered bark is 0·5 to 1 gramme. A concentrated infusion is used as an enema in prolapsus ani.

Casca de Pao Pereira (*Geissospermum Vellosii*, Fr. Allen).—The active principle, geissospermine, is best prepared by making an alcoholic extract, distilling off the alcohol and treating the residue with acidulated water and precipitating with ammonia. When prepared directly from a watery extract of the bark, the alkaloid is purified with difficulty.

Casca de Sangue de Drago (*Croton erythæma*, Mart. *Euphorbiaceæ*).—The bark is a favourite astringent. A decoction of the fresh bark evaporated to an extract of a weak syrupy consistence is known as mellado de sangue de drago. In chronic diarrhœa of adults the dose is a teaspoonful three times a day; for children a teaspoonful of a mixture of 2 grammes of the extract with 60 grammes of water every three hours. It is employed in the form of injection for gonorrhœa and leucorrhœa. It has also been used as a vulnerary with success.

Casca de Raiz Timbo (*Lonchocarpus Peckoltii*, Waura *Leguminosæ*).—A very powerful narcotic drug, which deserves to be introduced into Europe.

Casca de Tinguaciba (*Xanthoxylum tinguassiba*, St. Hil. *Rutaceæ*).—The decoction is used as a powerful sudorific, and in the form of a gargle for affections of the throat, also as an addition to odontalgic tincture. Dr. Peckolt has found in the bark an alkaloid producing effects similar to those of pilocarpine.

Quina do Remijio (*Remijia ferruginea*, Ol. *Cinchonaceæ*).—The root-bark has long been used as a remedy for intermittent fever by the wandering natives. The active principle is an acid resin having a shining crystalline appearance and named by Dr. Peckolt vieirine after Dr. J. A. Vieira de Mattos, who discovered it in 1860. The vieirine can be prepared by exhausting the powdered bark with water rendered alkaline with ammonium or sodium hydrate and precipitating the liquid with acetic or hydrochloric acid. If extracted by means of milk of lime and alcohol it is obtained in a shining crystalline form resembling santonin. It is soluble in alcohol and alkalies and is given in a mixture with wine and bicarbonate of sodium.

Raiz de azedinha grama (*Oxalis violacea*, Vell.)—Root used as a diuretic; it is sweet and edible.

Raiz de Calumba de Brasil (*Simaruba salubris*, Engl.).—This is used as a tonic in weak digestion and for diarrhœa.

Raiz de Jaborandi do Rio (*Artanthe Mollicoma*, Miq.)—Root used as a diuretic and in liver complaints. (See Peckolt in *Pharm. Centralh.*, 1878, No. 37.)

ARTICLE 3545.

ACKER ON THE TRANSMISSIBILITY OF TUBERCLE BY VACCINATION.

Dr. Joseph Acker (*Centralblatt für Allgem. Gesundheitspflege*) reviews the question of the transmissibility of tubercle by means of vaccination.

The notion of the communicability of phthisis is not new. In the last century phthisis and scrofulous diseases were frequently classed with venereal affections and itch; but, though the physicians of the early part of the present century treated the possibility of the transmission of tubercle through vaccination as in the highest degree improbable, it must be confessed that Koch's discovery of the tubercle-bacillus rendered a re-investigation of the whole subject imperative; although hitherto there has not been a tittle of evidence in favour of any increase of consumption or scrofula in consequence of vaccination.

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* See *Archiv der Ph.*, Band xcvii., p. 271.

The experience of Willan, Woodville, Alderson, Perroud, Brevard, and Tyndall, and, in a still higher degree, of Alford and Thiriar, showed that, when vaccine lymph was taken from persons already infected with small-pox, it was incapable of communicating the latter; and that, even when the characteristic pustules of variola and vaccinia were developed side by side, each was capable of conveying its own virus only; though it must be admitted that the cases of small-pox and of tubercle are not strictly parallel.

More to the point is that of syphilis; but even here it has been found that the clear lymph obtained between the fifth and seventh days after vaccination could be used without ill results, while the purulent matter of the second week was highly infectious.

The superiority of the lymph taken from the third to the sixth days over that of the seventh, eighth, and ninth days, when micrococci of all kinds and leucocytes make their appearance, has been practically ascertained; and the suggestion of Koch that these other micro-organisms by their rapid growth, or perhaps by some product of their development, overpower those of the original vaccine affords at least a probable explanation.

Lothar Meyer examined the lymph from eighteen phthisical persons for tubercle-bacilli without success; but, Wolff having thrown some doubt on the trustworthiness of Meyer's observations, Dr. Acker, at the suggestion of Dr. Woltberg, of the Imperial Board of Health, undertook a series of the most carefully conducted experiments. Eighty-seven phthisical persons, in the sputa of most of whom tubercle-bacilli were present in large numbers, were vaccinated under antiseptic precautions, their skins being carefully washed with soap and alcohol, and the parts kept covered with antiseptic cotton, except during the moments while the lymph was withdrawn by previously sterilised needles. Lymph was taken day by day so long as any was to be had, and 214 preparations were made, the most approved methods of mounting and staining being employed. In no single instance could a tubercle-bacillus be discovered. Weigert, from the connection between venous and acute miliary tuberculosis, had come to the conclusion that the acute miliary form of the disease was due to the dissemination of the bacilli through the venous circulation; and, as Ponfick has shown, it may also originate in tubercle of the thoracic duct; whereas in the more chronic and localised forms the bacilli are at least originally confined to certain glands, and thus do not find their way so easily into the general circulation. Prior, Gessler, and Wechselbaum invariably found bacilli in the blood of acute miliary cases, but not in that of chronic phthisis, nor in the urine and milk unless the kidneys and mammary glands were already invaded.

On the suggestion of Prof. Böllinger, Dr. Schmidt undertook another series of experiments, with a view to determine the possibility of inoculating tubercle into the subcutaneous tissues of rabbits and guinea-pigs, animals which are, as is well known, extremely susceptible of artificial tuberculisation by inoculation into the anterior chamber of the eye or into the pleural and peritoneal cavities. Dr. Acker repeated Schmidt's experiments with the same result; that in not a single instance did he succeed in infecting these animals by subcutaneous injection of tubercle-bacilli, although others inoculated at the same time and with the same materials, into the eyes or serous cavities, succumbed speedily and certainly.

He therefore comes to the conclusion that it is only in cases of acute miliary tuberculosis, and when blood is allowed to mix with the lymph, that the vaccine vesicle can by any possibility contain tubercle-bacilli; and that, even should such lymph be used, which it could not be without inconceivable negligence or perversity, the skin presents so unfavourable a soil for the bacillus that infection would be in the last degree improbable, though at the same time he would advise the use of lymph taken not later than the seventh day, as affording the greatest possible safeguard against infection of any kind whatever. E. F. WILLOUGHBY, M.B.

ARTICLE 3546.

SÉE AND MATHIEU ON ATONIC DILATATION OF THE STOMACH.

IN the *Revue de Médecine* for Sept. 10, 1884, MM. Sée and Mathieu develop their views in regard to the symptomatology, diagnosis, and treatment of atonic dilatation of the stomach, which unquestionably, though sufficiently common, is often overlooked or but ill-understood. Even in the latest editions of the most approved text-books, atonic dilatation of the stomach, as distinguished from dilatation the result of obstruction, is dismissed rather cursorily.

The symptoms vary considerably in the acute and chronic forms, in the earlier and later stages; but in general the muscular walls of the stomach are thin and the vomited matter is free from blood, two points upon which a differential diagnosis from obstructive dilatation may be based. A reliable diagnosis can as against only follow repeated examinations.

The symptoms may be divided into physical and functional. The former declare themselves upon inspection, percussion, succussion, and auscultation and internal exploration; the latter—the functional symptoms—declare themselves by flatulence, pains (which may be spontaneous or provoked), vomiting, constipation, dyspepsia (deranged gastric chemistry), and general constitutional disturbance.

According to the predominance of one or another set of these symptoms, MM. Sée and Mathieu find it convenient to divide their cases into a simple class, a painful class, a class characterised by gastric repletion, and a dyspeptic class.

Inspection furnishes but little reliable information. The epigastrium may be unduly prominent or even very much distended, but the value of this symptom can only be determined by percussion. Sometimes peristaltic movements of greater or less energy can be seen through the abdominal walls. Percussion yields far more important information, but must be pursued methodically and with precision, and repeated frequently under varying conditions and positions. The vertical extent of the gastric tympany is the principal point. By percussing from several points of departure, the upper border of the stomach can be determined without much difficulty; but the lower border is sometimes not made out so easily, though frequently, by percussing carefully upward from a point about midway between the pubes and the umbilicus until the small intestine is reached, and then diverging towards the border of the false ribs at the mammillary line, the line of the greater curvature may be also marked out. When difficulty is encountered the splashing sound of liquid in the stomach or of liquid introduced for the purpose may be of much assistance; and in all cases further information may be gained as to the gastric distension or distensibility by emptying the stomach with the siphon tube, or by introducing effervescing mixtures. The healthy stomach and the dilated stomach both vary greatly, of course, in their size under different circumstances, and even at times during an examination; but these writers think one is justified in diagnosticating *distention* when the upper and lower borders of the gastric tympany are found on a single occasion twelve to fourteen centimètres (five to six inches) apart, and *dilatation* when that space is found constant at five or six successive examinations under varying conditions and in various attitudes. The introduction of a sound into the stomach as a means, combined with external palpation, of determining the size of the stomach, as suggested and practised by Leube, is not approved, and is stigmatised as highly dangerous. The gastric walls in many of these cases are certainly very thin. Succussion and splashing, as interpreted by auscultation, have a minor value among the physical signs of dilatation.

The functional symptoms, when present, which is generally but not always the case, are characteristic and of themselves indicate strongly the presence of the condition. Flatulence in an extreme degree supervenes immediately after meals, and persists for several hours, accompanied by swelling and a sense of weight at the epigastrium. Pains springing from the epigastrium and radiating out towards the thorax, the abdomen, and the left hypochondrium, supervene by crises varied by periods of vague, dull discomfort; these crises of epigastric pain are not accompanied by vomiting, as is the case with the gastric crises of locomotor ataxy and with hepatic colic. Pains may also be provoked by pressure or by the ingestion of very cold or acid fermented drinks. The point of greatest tenderness is then usually just under the upper border of the false ribs on the right. Vomiting is not very frequent in moderate cases of atonic dilatation, but belongs especially to the pronounced forms, where the stomach has become an inert pouch passively distended with a semi-liquid fermenting mass, and to cases with a hysterical element: in both of which classes the vomiting is not seldom attended by convulsions and tetanic phenomena, due to the dehydration of the blood and anæmia of the nervous centres. Constipation, often obstinate and alternating at long intervals with attacks of profuse diarrhœa, is a common symptom. The dyspepsia, which may be absent, or may precede but generally follows atonic dilatation, is marked by bitter regurgitation and acid vomiting. In simple dilatation, the digestion is often performed completely, a good appetite is preserved, and scarcely any general depression is present. As for the constitutional effects, it is not always easy to estimate how far they result from the ectasy, and how far from the causes which produced the ectasy itself. Frequently there is a vicious circle, but sometimes a simple washing out of the viscus shows that the frontal headache, the malaise, the inaptitude for mental work, the vertigo, and the fainting turns, were secondary to and dependent upon the dilatation.

The treatment of these cases may be classed under two heads: the pathogenic and the symptomatic treatment. By the former, one seeks to avoid or suppress the causes which provoke dilatation, and to modify a general condition of health which gives those causes a favourable opportunity to assert themselves; by the latter, one palliates the annoyances of a state which there may be no hope of curing. The fact that simple dilatation is a tolerably common sequel of typhoid fever, gives a clue to its mode of origin and mode of cure.

Excessive alimentation and substances causing gastric relaxation must be avoided. The motor functions of the stomach and intestines must be regulated. Constipation it is of prime moment to overcome. The muscular coat of the stomach should be excited to action—by electricity if need be, externally or internally. The attacks of pain should be controlled, and chloroform water does good service for this purpose, except with some hysterical patients. For washing out, it may be used in the proportion of one part to three of pure water, care being taken to leave very little of this mixture in the stomach, and to follow it by a second washing with plain water. Washing out with an alkaline water, such as Vichy, may also be employed to combat dyspepsia accompanied by excessive mucous or fermentative acid secretion.

Want of space has made it impossible for the *Boston Medical and Surgical Journal* of Nov. 15, 1884, to which we are indebted for this article, to follow MM. Sée and Mathieu in all the details of their suggestive articles, which are not improved in form by a somewhat minute repetition of the points they desire to present; but that journal expresses its satisfaction at being able to call attention to so praiseworthy an effort to elucidate a somewhat obscure and neglected pathological condition.

ARTICLE 3547.

CARLE AND RATTONE ON THE ETIOLOGY OF TETANUS.[*]

ROSE in 1868 injected the blood, one hour after death, of a patient who had died of tetanus into the muscles of the back of a rabbit. This was at first followed by no symptoms, but later a caseous nodule appeared in the point of injection, and two similar nodules appeared in the thoracic parietes; two months and a half later, persistent suppuration was established, and the animal dragged with difficulty the posterior limbs, over which he finally lost all power, and extensive gangrene appeared. Death took place three months after the injection, and the necropsy revealed nothing abnormal, either in the brain or in the spinal cord.

In 1870 Arloing and Tripier made some experiments with the same scope in rabbits and horses. In the rabbits they injected pus and blood, taken separately from a man who had died twenty-four hours previously from traumatic tetanus, and obtained no result. In a second group of experiments on dogs they injected in the first animal, into the femoral vein, about 2 cubic centimètres of serous pus, taken from a man who died in twenty-seven hours from traumatic tetanus. The pus was taken two hours before death. In this case, and in that of another dog injected at the same time with the blood of the same patient, the result was negative. Lastly, from a horse affected by spontaneous tetanus they took 200 grammes of blood and injected it into the left jugular vein of an old horse; after ten days, there being no symptoms, the horse was no longer observed.

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[*] Experimental Study on the Etiology of Tetanus. (*Giorn. dell' Accad. di Medicina di Torino*, and *Gazz. Med. Ital. Prov. Venete*, Nov. 15, 1884.)

Antonelli and Coco also obtained only negative results, as did Billroth in analogous experiments. Rose and Billroth, while not denying the infective nature of tetanus, look upon it as not proved. Arloing and Tripier reject it completely, and hold that tetanus is a neurosis of reflex origin.

Carle and Rattone hold that the unsuccessful injection of the blood from a tetanus patient proves only that the infection is not transmitted by this means; and it is known that the same thing happens in other certainly parasitic diseases; for example, in rabies the inoculation of the blood and other tissues does not give rise to the disease in another animal, while the saliva and the inoculation of special tracts of the central nervous system as certainly does. Neither does the unsuccessful inoculation of pus from a tetanic patient militate against the infection theory, since the pus was taken when the tetanus was clearly declared—that is to say, when the morbific agent was already probably localised in the central nervous system.

On Nov. 29, 1883, a man was admitted with the symptoms of tetanus, trismus, and marked permanent contraction of the muscles of the neck, with attacks of severe dyspnœa from intermittent contraction of the respiratory muscles. The disease had commenced two days before with trismus. The patient attributed the attack to a pustule of acne which he had on the right side of the neck, and which he had scratched, and thus caused to inflame. The pustule was hard, and as large as a hazel-nut, with a little bluish blister on the summit; some days previously it had discharged a drop of sanguinolent pus; but, on admission, there was no trace of suppuration nor of solution of continuity. The patient died on the following day.

Two hours after death, the pustule with the circumjacent infiltrated tissue was excised, instruments and recipient being carefully disinfected by heat. The material excised, macerated in distilled water, was injected in rabbits, an ordinary Pravaz's syringe being used, two-thirds full. The liquid thus prepared was preserved in a flask, well closed, and sterilised at the temperature of 0° C.; and injections were made with it at different dates. It preserved its efficacy intact one month after preparation. Examined at once, and many times later, it was seen to be rich in micro-organisms, bacilliform and roundish.

The experiments may be divided into three classes. 1. Twelve rabbits were injected directly with the material taken from the patient. 2. Four rabbits were injected with material from tetanised rabbits. 3. Eight rabbits were injected with septic pus, decomposed blood, cadaveric tissues, and with strychnia.

1. *Injection with Material from the Patient.*—In the first two days, there were no symptoms. On the third and fourth day, the animal showed signs of illness, and refused its food. From time to time there were tremors of the extremities, during which it could hardly stand. On the following day, the contraction of the muscles of the neck was generally well marked, the rabbit lying on its side with the head thrown strongly back, the back arched backwards, the extremities retracted, breathing frequent and difficult, temperature increased. Any noise or disturbance provoked contraction of the extremities, exaggerated the opisthotonos and the arrest of the respiration. When thus excited several times following, the animal became soon exhausted. This state lasted three or four days. One animal died in twenty-four hours.

2. *Rabbits injected with Material from Tetanised Rabbits.*—Two rabbits were injected with a maceration, and tetanus followed. Two others were injected with the blood, and no symptoms occurred.

3. *Rabbits injected with Septic Substances.*—After one or two days the animals became ill. In some, an increase of reflex excitability occurred at first, but it was very transitory; in two, there was convulsive movement of the extremities before death, but there was no permanent contraction of the muscles. The symptoms were very different from those of tetanus.

The authors conclude that—(1) human tetanus is an infective disease; (2) it is transmissible from man to rabbits; (3) it may be inoculated from rabbit to rabbit. G. D'ARCY ADAMS, M.D.

ARTICLE 3548.

HUTCHINSON ON THE RELATION OF CERTAIN DISEASES OF THE EYE TO GOUT.

IN the *Brit. Med. Jour.*, Nov. 1884, p. 995, is published the 'Bowman Lecture' delivered at the Ophthalmological Society by Mr. Jonathan Hutchinson, on the Relation of Certain Diseases of the Eye to Gout. The author commences his lecture by stating that he wishes to keep a clear distinction between gout and rheumatism. By gout is meant all states of health which are, whether directly or remotely, connected with the accumulation of urate of soda in the blood, as the result of overfeeding or defective assimilation.

The first condition with reference to diseases of the eye, to which the author alludes, is that termed by him the 'hot eye.' Usually only one eye is affected; the conjunctiva becomes red, the eyeball feels hot, and pricks as if sand were in it. This condition is met with in persons who inherit gout, who do not have the acute paroxysmal attack, but only forms of what the author terms *quiet gout*, and more often called suppressed, or, better, undeclared gout. There is little or no evidence, says the author, as to the deposit of urate of soda in any of the structures of the eye. The nearest approach to proof of gouty deposit has been made probably in the case of what are known as the transverse calcareous bands in the cornea. Mr. Nettleship has recently collected much information respecting this disease, and the present state of our knowledge on this subject may be summed up, by saying that no one has yet proved that the salt deposited is that of gout.

Many forms of iritis are, however, of arthritic origin. In other words, they occur to those who are liable to attacks of inflammation of joints, and the inflammations of the eye occur under conditions similar to those which excite the inflammations of the joint. The point which the author considers is, whether the causes which produce the attacks of iritis belong to gout or to rheumatism; whether they sometimes belong to the one, and sometimes to the other; or lastly, whether they are not, in some cases, of a hybrid or mixed nature. The author draws up his conclusions on this subject by stating that, although in many individual cases of arthritic iritis there may be no proof of liability to gout in either the patient or his relatives, yet the tendency of the evidence in general is in favour of the conclusion that, when iritis occurs, there is in reality some gouty complication. The more purely and definitely is the case one of rheumatism, the less the probability that iritis will happen.

The author then goes on to prove that there is a very peculiar form of destructive iritis, occurring for the most part in young persons, which stands in all cases in direct relation with the inheritance of a gouty constitution. It does not occur to those who themselves suffer from attacks of gout, but to their descendants. There is also a peculiar form of chronic inflammation of certain parts of the eyeball, known as relapsing cyclitis. It is a cyclo-kerato-iritis, involving the ciliary region of the sclerotic, the adjacent part of the cornea, and the iris. It usually begins in one eye and affects the other after a long interval, and the last one usually suffers more severely than the other. There is no treatment for it short of complete change of climate, but there is not always a history of gout in these cases.

In speaking of gouty neuritis of the optic nerve, the question arises, whether there are any cases of inflammation of the optic nerve, or of any of the motor nerve-trunks of the eyeballs, the direct cause of which is the existence of a gouty constitution? The author can bring very little evidence in answer to this important subject, but is of opinion that gout has a great tendency to the production of glaucoma.

Another important affection of the eye is retinitis hæmorrhagica, which is rarely seen except in those who are themselves gouty. It is a disease of middle life, and seldom happens in both eyes at once.

The lecture terminates with a few remarks on 'the proofs of gout.' In the case of humoral or acquired gout, there ought to be the history of one or more definite attacks of joint-inflammation, usually of an acute character. As regards the inherited form, it is necessary to inquire into the family history, and to ascertain if the fathers or grandfathers are known to have definitely suffered. If even uncles, aunts, brothers or sisters, or cousins have suffered from true gout in early life, the belief that a family taint exists becomes very probable. Evidence must be sifted carefully, and inquiry made not only of the patient himself, but also of other members of his family. Richard Neale, M.D.

Article 3549.

ANREP, SPRIMON, AND KATZAUROFF ON THE ACTION OF CUCAIN.

Professor V. K. Anrep, of Charkov (*Vratch*, No. 46, 1884), who first discovered the local anæsthetic property of cucain in 1879 (*see* his article in Pflüger's *Archiv*, 1879, vol. xxi., p. 38), supplements his previous observations by several new ones, which may be given thus.

1. A frog's leg, being dipped into a 0·2 to 0·05 per cent. solution of a cucain salt, in ten to twenty minutes shows a strongly marked anæsthesia of the ends of the nerves of sensation.

2. Painting of the tongue with a solution of cucain leads to a more or less complete loss of taste for sour and sweet; pricking with a pin is felt only like a slight touch.

3. A hypodermic injection of 1 to 5 milligrammes of cucain produces complete loss of sensibility around the spot of the injection.

4. Painting of the mucous membranes with a solution of cucain, as well as the internal use of moderate doses of the alkaloid, causes dryness of these structures in consequence of restriction of their secretions. Cucain diminishes the secretion of gastric juice, saliva, tears, and, seemingly, sweat (in phthisical patients).

5. The anæsthetic action of cucain is always but temporary; it lasts not longer than ten to twenty minutes (according to the dose used), but may be prolonged by means of repeated injections, paintings, &c.

6. Dr. Anrep used cucain in the following conditions. *a.* In acute urethritis with intense pain during passing urine, an injection of 8 to 10 grammes of a 0·4 to 0·9 per cent. aqueous solution of sulphate of cucain made the next micturition completely painless. The cucain injections, repeated every four or five hours, seemed to shorten the course of the disease. *b.* In two cases of photophobia in iritis and phlyctenular keratitis, the anæsthetic action was very striking, though of short duration. To keep up the action, the author advises the employment of eye-baths made of 0·2 to 0·1 per cent. solution of cucain. *c.* In a case of acute pleurisy, an injection of 25 milligrammes of cucain into one of the intercostal spaces on the diseased side removed every trace of pain, and allowed the patient to breathe quite comfortably for two hours. *d.* In a case of severe intercostal neuralgia, eight injections in five days brought each time a complete temporary relief of pain. (The case was ultimately cured by the use of Paquelin's thermo-cautery.) *e.* In three cases of painful ulcers, paintings or powderings gave most satisfactory results. *f.* In a case of scrotal eczema with agonising itch, powdering with cucain, and the application of a cucain lotion, completely relieved pain each time for three hours. *g.* In acute coryza, painting of the nasal mucous membrane had for its effect only a temporary restriction of discharge.

Professor Anrep thinks that cucain, as a local anæsthetic agent, has the following advantages comparatively with morphia. 1. Cucain belongs to the group of alkaloids with a relatively slight general action. 2. Its continued use does not require any increase of dose. 3. Cucain does not produce any symptoms of chronic poisoning.

In an interesting editorial article in the *Meditz. Obozrenie*, No. 20, 1884, p. 724, Dr. V. F. Sprimon, of Moscow, states his experience on the action of cucain on himself and patients. During several years, the author successfully used cuca in form of Mariani's wine in various neuroses—such as cardiac weakness, nervous palpitation, gastro-intestinal neuroses, &c. Of late, the author (who himself suffered from nervous dyspepsia) began to take hydrochlorate of cucain, one-fourth of a grain in powder, once or twice a day. Under this treatment, indisposition to mental work after meals, sense of epigastric oppression, bad taste in the mouth

&c., soon disappeared, and the general state improved. It is interesting to note that in the author's case, as well as in the reporter's, the internal or subcutaneous administration of one-third of a grain of cucain is invariably followed by an increased peristalsis, with painless evacuation of the intestinal contents; the appetite and general health remaining good.

When painted with a 5 per cent. solution of cucain, the mucous membrane of the tongue, lips, and cheeks within a few minutes becomes pale, cold, and more or less anæsthetic. The pathic sensibility suffers first; then thermic, and, finally, tactile anæsthesia follows. Swallowing and articulation become rather difficult, all the phenomena lasting from a quarter of an hour to one hour. On painting the fauces with the cucain solution, tickling with the finger does not produce any usual emetic movements.

On the instillation of a 5 per cent. solution in the auditory meatus, the temperature of the cucainised ear falls about half a degree (cent.), comparatively with the other (normal) ear. Hearing remains unaltered.

On introducing a small crystal (about one-twentieth of a grain) of cucain into the conjunctival sac there occurs, in three to five minutes, a dilatation of the pupil (which may reach the maximal degree, contrary to Koller's assertion), anæmia of the conjunctiva, anæsthesia (of all kinds) of the latter and of the cornea, some amount of protrusion of the eye, and enlargement of the eye-slit. The dilatation of the pupil gradually disappears in about twelve hours, lasting in a considerable degree only about three hours. The accommodation remains almost unchanged. The author saw also a rapid disappearance of blepharospasm of the cucainised eye.

The application of solution of cucain to the mucous membrane of the rectum and vagina produces also ischæmia, and loss of sensibility of all kinds.

After a subcutaneous injection of half a grain into the upper third of the forearm, along the line of the ulnar artery, the author saw in a quarter of an hour a diminution of pathic and thermic sensibility along the whole ulnar side of the forearm down to the wrist; in twenty minutes, a strongly marked paleness of the whole forearm and hand appeared. The temperature of the ulnar region fell as low as 34°·5 C., while on the other side it was 35°·1 C.; the difference gradually disappearing in an hour after the injection.

Discussing the question of cucain on the vascular system, Dr. Sprimon points out that the drug in the first quarter of an hour acts decidedly as a stimulant, the pulse becoming more frequent and fuller; but afterwards, while remaining fuller, it returns to normal frequency. A kind of general excitement, or rather a sense of cheerfulness and increased strength, which is observed from the beginning, lasts for a long time after the restoration of the normal condition of the pulse. Cucain excites the vaso-constrictor nerves; it has tonic, and only tonic, action on the vessels.

From his own observations, as well as from the observations published recently by Freud, Koller, Agnew, O. Moore, James Minor, Königstein, Knapp, Roosa, Katzauroff, and others, Dr. Sprimon predicts a great future for the drug in medical practice generally, and invites all specialists having to do with the mucous membranes to give cucain the widest possible trial. The author thinks that in ophthalmology cucain will partly supersede atropia and chloroform; in diseases of the larynx, nose, ear, pharynx, fauces, and mouth, 'it will enable one to examine and operate both conveniently and quietly,' not to speak of its therapeutic application. In diseases of the urogenital tract, it will facilitate urethroscopy, sounding, and catheterisation. Injections of cucain into the bladder should be tried in cases of vesical cancer, stone, spasm, and irritability; injections into the rectum, in cases of painful hæmorrhoids, fissures, carcinoma, &c.; injections into the vagina, in cases of vaginism, cancer, &c. In view of the anæsthetic action of the drug, as well as in view of its special action on the sympathetic nerve, 'it is necessary to try cucain in various neuroses, neuralgiæ, spasms, &c.; it seems probable that it will prove useful as a means of regulating the circulation in different organs, arresting acute congestions in mucous membranes, and cutting short inflammations in their initial stage.'

In two communications in the *Vratch*, 1884, Nos. 43 and 45, Dr. J. N. Katzauroff states his experience on the action of cucain on the eye. He used, *a*, a vaseline ointment with 5 per cent. of pure cucain (Merck's cucainum purum); *b*, a vaseline ointment with 10 per cent. of pure cucain; and *c*, a 5 per cent. solution of muriate of cucain. The main results of the author's experiments may be summed up under three heads.

1. *Action on Sensibility.*—Analgesia ensues very rapidly (in two to three minutes), is complete, and lasts sufficiently long to allow the performance of ophthalmic operations. The first operation made by the author in cucainised eye was extraction of a steel chip from the cornea; the patient did not feel either any pain or touch of the instruments. Discission of cataract in both of the eyes in another patient proved as painless. A third operation was enucleation of a glaucomatous eye; dissection of the conjunctiva and division of the muscles were almost painless (as the patient herself stated; she quietly followed the author's demands as to turning her eyes in that or other direction). Only the last stage of the operation (that is, dislocation of the eyeball and division of the optic and ciliary nerves) was accompanied by intense pain, though of short duration. In all the cases a 5 per cent. ointment was used.

2. *Action on the Pupil.*—The introduction of a 5 per cent. ointment was followed, in five and nine minutes, by dilatation of the pupil, which was less considerable than under atropia, lasted from six to ten hours, and completely disappeared only on the next morning. A 5 per cent. solution brought about the same effect, but the dilatation developed itself more slowly, was less considerable, and disappeared earlier. On the contrary, when a 10 per cent. ointment was used, the dilatation occurred in seven to eight minutes, reached its maximal degree in twenty-five to thirty minutes, and lasted longer than under cucainisation with a weaker ointment. In all the cases, the reaction of the pupil to light was preserved, but under a 10 per cent. ointment much less so than under a 5 per cent. ointment and solution. As a rule, the dilatation begins from the lower segment of the pupil, and spreads to the upper but gradually.

3. *Action on Accommodation.*—A 10 per cent. ointment undoubtedly paralyses the ciliary muscle (in about twenty-five minutes); but the amount of paralysis is considerably less than in the case of atropia. When a 5 per cent. ointment or solution is used, paresis of accommodation is extremely slight (nearly absent).

Like Koller, Königstein, Sprimon, &c., Dr. Katzauroff observed also a bloodless condition of the conjunctiva after instillation of solution of cucain. In common with Königstein and Sprimon, he saw also an enlargement of the eye-slit with apparent exophthalmos. V. Idelson, M.D.

Article 3550.

ARGUTINSKY ON THE ACTION OF ANTIPYRIN IN CROUPOUS PNEUMONIA IN CHILDREN.

In the *Vratch*, Nos. 41 and 42, 1884, Dr. P. M. Argutinsky, of the Prince of Oldenburg's Hospital for Children, in St. Petersburg, publishes a detailed account of his observations on the action of antipyrin in five cases of croupous pneumonia in children from four to eight years of age. Antipyrin was given in single doses of half a gramme to one gramme, repeated two or three times at an hour's interval. The little patients took the drug (dissolved in a tablespoonful of water) quite readily. Vomiting and sickness were observed very seldom (only twice in twenty-five times of the administration). The results obtained by the author are these.

I. *Action on the Temperature.*—1. The fall of temperature usually commences after the first dose, increases rapidly during first three hours, often reaching 2° or 3° C. (about 3°·5 to 5°·5 F.), and then continues to increase more slowly, reaching its limit in six, twelve, or eighteen hours after the first dose. 2. The figures obtained from average doses lie between 36° and 37° C. (96°·8 and 98°·6 F.) Large doses give subnormal figures, 35° C. (95° F.), and even below this level. 3. The average duration of the fall of temperature after moderate doses is about twenty-four hours; after large doses, about forty-eight hours. In four of the author's cases, the fall of temperature caused by antipyrin was not followed by any rise; in other words, antipyrin cut short the fever.

II. *Action on the Vascular System.*—1. Antipyrin does not produce any weakening action on the heart. 2. The pulse remains full and absolutely regular. 3. The frequency of the pulse is more or less considerably diminished, but the diminution occurs only several hours after the temperature has reached the normal or subnormal level.

III. *Respiration* is decreased in frequency, the decrease going parallel with the fall of the temperature. At the same time, it becomes deeper.

IV. *The General State.*—When the action of antipyrin was fully developed, the patients felt remarkably well and cheerful, asked to be allowed out of bed, and so on. Profuse perspiration was observed only once. Antipyrin usually produced only slight moisture on the head, neck, and chest, which disappeared within a few hours.

The author recommends the following minimal doses of antipyrin: for children six months to a year old, 0·2 gramme three times a day, at intervals of three hours; for children from 1 to 3 years of age, 0·3 gramme three times a day, at intervals of three or two hours; for children, aged 4 and 5, from 0·3 to 0·4 gramme three times a day, at intervals of two hours; for children aged from 6 to 8, 0·5 to 0·6 gramme three times daily, at intervals of two hours; lastly, for children, aged from 10 to 12, 0·6 to 0·75 gramme three times daily, at intervals of an hour. If any circumstances of the case require an increased dose, the increase must be made with due caution (0·1 gramme per cent. dose, or 0·3 gramme in a day).

Dr. Argutinsky made also some observations on the action of antipyrin on the temperature in healthy children, aged from 5 to 10, and came to the following conclusions. 1. In large and middle antipyretic doses, antipyrin depresses the normal temperature of the child. In average, it causes a fall of 1° to 1°·5 C. below the daily minimum. (In one case the temperature sank as low as 34°·5 C.) 2. Whenever in the day antipyrin is given (in the morning, midday, or at bedtime), the period of its maximal action invariably coincides with the period of low daily temperature (that is, the lowest thermometric figures are read during night-time). Moderate doses of antipyrin do not influence the daily temperatures at all; large doses do, but in a slight degree. 3. Night temperatures sometimes remain depressed even during the next twenty-four hours, after one dose taken in the day.

V. Idelson, M.D.

Article 3551.

DEBOVE ON THE TREATMENT OF ULCER OF THE STOMACH.[*]

Simple ulcer of the stomach—the ulcer of J. Cruveilhier, which is often called the round ulcer—is one of the most rebellious affections to therapeutic measures. Why is it that this simple ulcer, as it is called, persists for months and years without cicatrising? What cause presides over the formation of the ulcer, and what influences preside over its development, its chronic course? If one wish to give to these questions a truly scientific solution, he is obliged to acknowledge that there is something connected with its origin and course which is still unknown. The theories of thrombosis, embolism, and of inflammation, if they explain the losses of substance, and the ulcerations of the mucous membrane, do not explain the form and characters of the round ulcer. So far as the action of gastric juice is concerned, if it contribute to the progress and extension of the ulcer by a sort of digestion, why is this digestion limited so often, and why does it not cause perforation and destruction of the stomach. It would seem that the acid reaction of the gastric fluids has a bad effect, since much good has been done by alkalies and Vichy water.

The treatment of these ulcers is a more simple matter than the pathogenesis. The beneficial effects of strict diet have long been recognised, especially of the milk-diet. But there are serious objections to the milk-treatment. A person with ulcer of the stomach should take, if put on the milk-diet exclusively, three or four quarts of milk every day. This enormous quantity may be well tolerated, and the gastric pains, the vomiting, and hæmorrhages may cease. But one cannot with impunity introduce into a sound stomach, much less into one in bad condition, four quarts of liquid a day without causing dilatation of the stomach. Without doubt, this can be in a manner obviated if the patient be not allowed to take much milk at a time. But the morbid state and atony of the stomach make digestion more slow and difficult. If to this we add the fact this dilatation of the stomach may cause hæmorrhage and perforation of the ulcers, it is easily seen that the milk-diet may be a source of great danger.

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[*] *Le Progrès Médical* and *Canada Medical Record.*

For a long time, M. Debove has paid special attention to means for reducing the quantity of milk ingested. For this purpose he has used concentrated milk and powders of milk, representing in small volume considerable quantities of milk; but these have not the nutritive value which is found in meat powders. It has been objected to M. Debove's theory that the dilatation of the stomach which he attributes to the quantity of the ingesta is due to the affection itself—to the ulcer of the stomach; but, as Bouchard has seen (who has for a long time recommended a dry diet for dilatation of the stomach), and as Debove has also seen, the dilatation disappears under the influence of this diet alone, so that it cannot be due to the ulcer.

The dry diet of M. Bouchard consists in the administration of food very finely divided or very divisible, as powdered meat or cheese, and at the same time very nutritive. While the amount of dry food is reduced, only a minimum quantity of liquid is allowed, about a pint of water or wine and water in twenty-four hours. On this diet the stomach is never distended by food, and the dilatation diminishes or disappears. It is by this dry diet that M. Debove treats ulcer of the stomach, but he adds an important factor to it. Before commencing treatment he washes out the stomach, in order to clear away the mucus and the *débris* of food which may be there. This washing is done with a rubber tube by the physician himself, as a little carelessness in its use might cause hæmorrhage. Duguet has reported a fatal case of hæmatemesis, caused by the patient attempting to use the tube himself. Debove has never had a case of hæmorrhage attributable to the use of the tube, but he very justly remarks that hæmorrhages are quite frequent in ulcer of the stomach, and that when the tube brings up 'coffee-grounds' blood it cannot be said that the hæmorrhage was caused by the washing. If, however, during the washing the liquid brought up have a rosy tint, the operation should be at once suspended.

M. Debove believes that, if gastric digestion and the action of the gastric juice can be suspended for some time, the cure of the ulcer will be greatly favoured. By rendering the gastric juice alkaline its digestive properties are taken away, and the transformation of albuminoid substances into peptones is stopped. In this manner, the matters undigested by the stomach pass into the intestines with an alkaline reaction very favourable to intestinal digestion. Debove has obtained effects which lead him to believe that he can make a patient take ʒvij. of bicarbonate of soda, in three doses, in twenty-four hours. He has shown by his washings of the stomach that, under the influence of this treatment, the stomach liquids were never acid, and contained no peptones. The patients were given ʒvjss. of meat-powder and ʒijss. of bicarbonate of soda three times a day. This mixture not being very agreeable to the taste, is introduced into the stomach through the tube. To this diet, which represents ʒlxx. of meat and ʒvijss. of bicarbonate of soda a day, is added a quart of milk, and taken in small quantities during the day.

The alkaline cachexia, of which Trousseau and other physicians have spoken, was seen in none of Debove's patients. This treatment has given most excellent results—results which have never been attained by any other method of treatment.

ARTICLE 3552.

ACKERMANN ON CIRRHOSIS OF THE LIVER.

UP to the present time nothing seems to have been better determined than that the primary change in cirrhosis of the liver is a chronic inflammatory hyperplasia of the interacinous connective tissue, and that secondarily the cells are destroyed by pressure of the contracting cicatricial tissue. But at the recent meeting of the Society of German Naturalists and Physicians at Magdeburg, Professor Ackermann read a paper (*Med. News of Philadelphia*) in which he alleged that the primary change is a necrosis of the liver-cells, constantly associated with a deposit of fat in their interior. This death is brought about by the action of the poison circulating in the portal blood, be it alcohol, phosphorus, or a micro-organism. On the other hand, he considers the overgrowth of connective tissue as a secondary, reactive, and even salutary process, intended to limit the primary one. The hyperplasia is attended from the beginning by the formation of a large number of new arterial capillaries, which not only serve for the nourishment of the liver, but also render the secretion of bile possible for a time longer. This is accomplished by the formation of new biliary passages, which maintain a communication between the parts of the liver cut off, and the pre-existing bile-ducts. It is in consequence of this, according to Ackermann, that jaundice is rare in cases of cirrhosis. These capillaries, both biliary and arterial, are very distinctly present in the oldest parts of the connective tissue, a fact which is incompatible with the view that the atrophy of the cells is a consequence of the contraction, since, if this were the case, the blood-vessels and the biliary capillaries would be destroyed by the process. The liver is smaller, because, as a rule, the destruction of the cells is more rapid than the new formation of connective tissue.

On the other hand, if the connective tissue formation is more rapid than the cell destruction, there must result an enlargement of the entire organ. And this is what always occurs in the first stage, and is sometimes continued, resulting in the morbid product known as that of hypertrophic cirrhosis, which, therefore, according to this view, need not be considered a special form of the disease.

Ackermann admits that there is a very rare affection, which he has seen but once in man and twice in the livers of horses, in which there is a true inter- and intra-acinous hyperplasia of connective tissue which follows the course of the pre-existing vessels, and is not accompanied by the formation of new ones. In this form the cells atrophy from pressure of the neoplastic connective tissue, but the vessels remain patulous, there is no ascites, and to the very end the organ remains larger than the normal, while the surface is smooth instead of nodular.

The discussion was participated in by Professors Rindfleisch, Strümpell, Aufrecht, Küsner, and Schwalbe. The first adhered to the original view of the origin of cirrhosis and the destruction of the cells by the contracting interstitial tissue; but the others seemed to favour the new views of Ackermann, adducing the analogous process in parenchymatous nephritis, in which a primary cellular change is followed by an interstitial hyperplasia, and the fact that liver cirrhosis begins with a primary disease of the liver-cells by causing artificial obstruction of the bile-ducts. While it is acknowledged that phosphorus poisoning induces a rapid destruction of liver cells, Küsner adduced the fact that chronic phosphorus poisoning causes a 'classic cirrhosis,' whence he thinks it also highly probable that in ordinary cirrhosis the primary change is in the parenchyma, while the interstitial hyperplasia is secondary.

There can be no doubt that there is some force in the analogies presented, but, had they been carried a little farther, it is not impossible that a different conclusion might have been reached. It is well known that there is a form of interstitial inflammation in the kidney in which there is a primary interstitial hyperplasia and a secondary destruction of parenchyma cells. It is well known, too, that this process is a slow one. Is it not more reasonable to suppose, therefore, that the same cause, operating slowly and in small quantities, produces an interstitial hyperplasia, which, when concentrated and operating rapidly, acts upon the parenchyma cells? At the same time, these researches of Ackermann open a new direction of research and thought which may lead to valuable results.

ARTICLE 3553.

SEEGEN ON A CASE OF LEVULOSE IN DIABETIC URINE.

THE appearance of left-handed glucose in the urine is very rare. Gorup-Besancz mentions that diabetic urine occasionally contains a non-crystallising sugar with left-handed rotation, and Zimmer reports a case, observed also by Czapeck, in which, besides grape-sugar, there was a considerable quantity of levulose. The specific gravity of the urine in this case was 10·55; it contained 9·8 per cent. of sugar by Fehling's method, but polarisation indicated 2·2 per cent. of left-handed sugar.

The present case, described by Dr. J. Seegen (*Centralbl. für die Med. Wochensch.*, No. 43, 1884), is the first out of a thousand cases of diabetes treated by himself, in which the author had an opportunity of observing levulose in the urine. Certainly not all these cases had been examined by polarisation (and the combination of this method with volumetric analysis is necessary to establish the presence of levulose), but a sufficient number had been thus examined to show that levulose is a rare constituent of the urine.

The patient was a woman, aged 46, whose mother had suffered from diabetes mellitus. She herself had always enjoyed good health, but was of a nervous disposition. Three years ago she complained of languor and dryness of the mouth. Sugar was found in the urine, and an appropriate diet was instituted, chiefly flesh meat, with green vegetables, and very little bread. Since then she remained in good health, and no further diabetic symptoms appeared. Her physician pronounced the case to be one of intermittent diabetes, as sugar was only found at times.

Such 'intermittent' cases being merely rendered so by the altered diet, according to the author's experience, this case was carefully observed. More bread was given on the first day. The urine, when examined in a Soleil-Ventzke polarising apparatus, rotated to the left, indicating 0·9 per cent., reckoned as grape-sugar, and Fehling's solution was copiously reduced. Careful analysis revealed neither albumen nor hemialbumose, nor peptone, and it was extremely probable that the left-handed rotation was due to levulose. This was proved as follows. More bread was allowed to the patient, and the urine passed a few hours after dinner was examined. It was clear, and without a trace of albumen, and the following tests were applied.

a. Ten cubic centimètres were diluted with 90 per cent. water (= 100 cubic centimètres). 20 cubic centimètres of this diluted urine were required to reduce 2 cubic centimètres of Fehling's solution (of which 1 cubic centimètre = 10 milligrammes of grape-sugar). This indicated 1 per cent. of levulose or 1·08 per cent. of grape-sugar, their reducing powers being as 92·4 to 100.

b. In the polarising apparatus, 1·8 per cent. of left-handed sugar was indicated.

c. Five cubic centimètres of urine were fermented with yeast and a drop of vinegar in a eudiometer-tube over mercury, and after three days the carbonic acid developed 1·05 per cent. of sugar.

d. Another portion was fermented for three days, and afterwards filtered; it then only faintly reduced the copper solution, and did not rotate the polarised ray.

The substance was thus undoubtedly levulose. The same results occurred two days afterwards. Amylaceous foods were then freely supplied for six days, at the end of which the urine was again examined. The morning urine did not rotate polarised light, and only faintly reduced the copper solution. The urine passed four hours after dinner gave the following sugar.

a. By polarisation	=	3·2 per cent.	
b. Volumetrically	=	1·69 ,,	(= 1·84 levulose)
c. By fermentation after 24 hours	=	1·5 ,,	
By fermentation after 4 days	=	1·64 ,,	
By fermentation after 9 days	=	1·83 ,,	
By fermentation after 15 days	=	2·03 ,,	

Some of the urine was sent to Prof. E. Ludwig's laboratory in Vienna, and there Dr. Mauthner confirmed the above. The author sums up as follows.

1. The urine contained a left-handed sugar, which could only be levulose, because the fermented urine showed no left-handed rotation.

2. The urine contained only left-handed sugar; there was no grape-sugar present, because the amount indicated by rotation agreed with that obtained by analysis. The specific rotation was −93° to −96° in all the experiments, at a temperature of 18° C. The specific rotation of levulose at 17°·5 C. has been given by Yuchsmied as −97·1, a result quite near enough. The sugar, estimated from fermentation, agreed with the above, after a few days. But small quantities of carbonic acid continued to be disengaged for fifteen days; this might be due to other matters in the urine, or even to decomposition of the yeast itself.

3. The excretion of levulose was caused and increased by amylaceous food, just as grape-sugar is in the lighter forms of diabetes.

4. No cause can be assigned for the formation of levulose, and further observations are required on this point.

E. J. EDWAR

ARTICLE 3554.

BRIEGER ON PUTREFACTION ALKALOIDS.

DR. L. BRIEGER, of Berlin, has recently published a memoir (*Ueber Ptomaïne*: Berlin, 1885) on the products of putrefaction, the importance of which can scarcely be over-estimated. It forms, indeed, one of the most valuable of recent contributions to the literature of the subject treated of, and supplies what is much needed—exact quantitative analyses of the chemical individuals obtained. In one respect only does Dr. Brieger's published work appear to be defective. He does not state the quantities of the various definite products obtained by him from given quantities of the materials operated on. Nevertheless, the analytical figures of 78 analyses of alkaloids and their salts are set out, so that any competent chemist can judge how far Dr. Brieger's conclusions are supported by the facts he adduces. A bibliography, extending to three pages, will be acceptable to the student of ptomaines.

Professor Brieger commences with the history of the cadaveric alkaloids, in which he freely criticises the results obtained by his predecessors in the same field of research, and he aptly points out the defect, fully appreciated by experts in this country, of foreign writers on the ptomaines; viz., that the products which they describe generally appear to have been syrupy extracts, solutions in glycerine, and the like—alkaline, it is true, in reaction, and giving some alkaloidal reactions, but destitute of the characters of fairly pure alkaloids and their salts. One very common description runs through the accounts of them; they were brown, and underwent spontaneous decomposition with great facility. Their well-known power of reducing ferri- to ferro-cyanide of potassium in the presence of a ferric salt was at one time supposed to be characteristic of the ptomaines as a class, and to serve for their discrimination from most of the vegetable alkaloids; but Brieger asserts that this reducing power is not possessed by the very definite putrefaction alkaloids he has obtained, and that the success of the test depends upon the presence of impurities.

Panum was the first to isolate a putrefaction alkaloid, but Nencki was the first to investigate methodically the products of putrefactive decomposition; and although he and others pointed out that among these, aromatic bodies—such as indol, skatol, phenols, and corresponding aromatic acids—were among the chief products, yet these were never present in sufficient quantities to account for the toxicity of putrid matter. It was then necessary to fall back upon alkaloidal bodies to account for the results, and Nencki was himself the first to both isolate and make a quantitative analysis of a putrefaction alkaloid from gelatine. To this he assigned the formula $C_8H_{11}N$, which is that of collidine. Nencki thought it to be isophenylethylamine. Gautier and Étard obtained the same base from putrid mackerel, together with another homologous base, $C_9H_{13}N$, probably an isomer of parvoline. Guareschi and Mosso also analysed a curarine-like base obtained from putrid fibrin, and deducted from an analysis of its platinum salt the formula $C_{10}H_{15}N$, or $C_{10}H_{13}N$, as probable.

Brieger in his recent work has investigated (A) the ptomaines of the gastric digestion of fibrin; (B) those derived from the putrefaction of mammalian flesh; (C) the ptomaines of putrefaction of fish; (D) those of putrid cheese; (E) the ptomaines from the putrefaction of gelatine; and (F) those of putrid yeast; and he gives a full description of his chemical results and physiological experiments.

A. *Peptonised Fibrin.*—Two hundred grammes of moist fibrin, after twenty-four hours' peptonisation by gastric juice at the temperature of the blood, yielded a toxic substance, *peptotoxine*, which was not satisfactorily isolated, and was not analysed. The same substance is formed during the putrefaction of albuminoids, but a putrescence extending over eight days destroys the peptotoxine previously formed.

B. *Putrid Mammalian Flesh.*—Identical products were obtained from the flesh of the horse, the ox, and man. After five days' putrescence in water at the normal temperature, the magma yielded (1) a non-toxic base, *neuridine*, $C_5H_{14}N_2$, allied to neurine. It yielded the salts $C_5H_{14}N_2.2HCl$, and $C_5H_{16}N_2PtCl_6$. It gives on distillation an equal number of molecules of di- and tri-methylamine. Neuridine is a diamine. 2. A vinyl-ammonium base, *neurine*, $C_5H_{13}NO$, or $N.C_2H_3.(C.H_3)_3OH$, *not* identical with choline. Brieger draws a clear distinction between these two alkaloids (which are usually, but incorrectly, thought to be identical) both with respect to their chemical characters and physiological activities. Choline is oxethyl trimethyl ammonium hydroxide $N.C_2H_4OH.(CH_3)_3OH$, and contains more water than the vinyl base. Neurine hydrochlorate is precipitated from its solution by tannin; not so choline. Conversely, phosphotungstic acid precipitates choline, but not neurine. Physiologically, the two alkaloids agree in characters, and act like muscarine, atropine being a counter poison to them. But neurine has a tenfold toxicity as compared with choline. The following are the formulæ of the gold and platinum salts of the two bases, the formulæ being borne out by Brieger's analyses:—

	Neurine.	Choline.
Gold	$C_5H_{12}N, AuCl_4$	$C_5H_{14}NO, AuCl_4$
Platinum	$2C_5H_{12}N, PtCl_6$	$2C_5H_{14}NO, PtCl_6$

Neurine is the characteristic base of putrid flesh. By lengthened putrefaction these bases are destroyed.

C. *Ptomaines from Putrid Fish.*—These were:—1, neuridine; 2, ethylene diamine, $C_2H_4(NH_2)_2H_2O$; 3, muscarine, $C_5H_{15}NO_3$, identical with that from the fly fungus; 4, a new base, gadinine, $C_7H_{17}NO_2$; and 5, triethylamine, $N(CH_3)_3$. The last three bases are characteristic of putrid fish.

D. *Putrid Cheese.*—This yielded the following bases:—1, neuridine; 2, trimethylamine.

E. *Putrid Gelatine.*—Brieger points out that the base which Nencki's analysis led him to think was isophenylethylamine, $C_6H_5.CH.CH_3.NH_2 = C_8H_{11}N$, agrees better with the formula $C_8H_{12}N$, an isomer of aldehyd-collidine. Nencki obtained this body by the action of the pancreas of the ox upon gelatine. From putrid gelatine Brieger has obtained—1, neuridine; 2, dimethylamine, $(CH_3)_2HN$; 3, a body like muscarine; but a sufficiency was not obtained for an ultimate analysis.

F. *The Ptomaine of Putrid Yeast.*—This was found to consist of dimethylamine.

Of these eight well-characterised ptomaines, neuridine, neurine, muscarine, ethelenediamine, gadinine, dimethylamine, trimethylamine, and triethylamine, six, viz., neurine, muscarine, ethylenediamine, dimethylamine, trimethylamine, and triethylamine have been produced synthetically. Neuridine and gadinine are new alkaloids. Neuridine is abundantly distributed, being not only met with among the products of the putrescence of mammalian flesh, fish, casein, and gelatin, but also in those of eggs and brain-substance. Neurine was only met with in the products of putrefaction of mammalian flesh, and dimethylamine in putrid gelatine and yeast.

We trust that Dr. Brieger will continue his valuable researches. It is understood that he is at present engaged in an endeavour to ascertain what are the specific products of definite micro-organisms. Probably it will be found that the nature of the products will be as much dependent upon the organisms giving rise to decomposition of nitrogenous organic bodies, as on the kind of body subjected to the action of the organisms.

THOS. STEVENSON, M.D.

ARTICLE 3555.

INVALID DIETARY AND ARTIFICIAL FEEDING.

IT is universally acknowledged that a good, sound, practical knowledge of dietetics is essential for the successful treatment of the sick. Drugs will do much for us, but the regulation of the diet is an equally important therapeutic agent. Even for the maintenance of health various kinds of food are required, and practically these consist of proteid or albuminous bodies, carbo-hydrates or starch, and sugar and fatty substances.

In considering the subject a knowledge of the action of the different ferments is essential. The following table, arranged by Dr. W. Roberts, of Manchester, will be found useful for reference.

Table of Digestive Juices and their Ferments.

Digestive Juices.	Ferments contained in them.	Action on Food-Stuffs.	Medicinal Substitutes.
Saliva.	Diastase or Ptyalin.	*Amylolytic*, changes starch into sugar and dextrine.	Various preparations of malt; extracts of malt; malt flour; extract of pancreas.
Gastric juice.	*a.* Pepsin.	*Proteolytic*, changes proteids into peptones in an acid medium.	Various preparations of pepsin: pepsin wine; liquor pepsiniæ; peptodyn.
	b. Curdling ferment.	Curdles the casein of milk.	Rennet.
Pancreatic juice.	*a.* Trypsin.	*Proteolytic*, changes proteids into peptones in an alkaline medium	Pancreatine; liquid extracts of pancreas. Glycerine extract of pancreas, &c. Liquor pancreaticus. Pancreatic rennet. Pancreatic emulsion.
	b. Curdling ferment.	Curdles the casein of milk.	
	c. Diastase.	*Amylolytic*, changes starch into sugar.	
	d. Emulsifying ferment.	Emulsifies fats.	
Bile.	Alkaline choliates.	Antacid and saponifying agents.	Purified bile and its preparations.

Proteids are during digestion converted into soluble peptones by the action of certain ferments, such, for example, as the pepsin of the gastric juice, and the trypsin of the pancreatic juice. When the gastric juice is secreted in insufficient quantity, an artificial substitute has to be employed. Pepsin acts in an acid medium only, so that it is usually given immediately after a meal, when the contents of the stomach have an acid reaction. Preparations of pepsin may be used to digest food before it is swallowed, but pepsin is not so useful as trypsin for the predigestion of proteids. The artificial digestion of food by the gastric method, *i.e.* with pepsin and hydrochloric acid, has many disadvantages, one of the most noticeable being that it produces an unsavoury mess. If the pancreatic method be employed, a more palatable mixture is produced, and the starchy matters as well as the proteids are acted on. Fortunately we have practically a number of preparations which may be used for predigesting food.

Extractum Pancreatis (*Fairchild*) is a new and important preparation. It possesses the power of transforming starch into dextrine and sugar. It converts proteids into peptones, emulsifies fat, and curdles the casein of milk. It should be used in all cases where the employment of predigested food is indicated. For convenience it is now put up in small glass tubes, each containing five grains of extractum pancreatis and fifteen grains of bicarbonate of soda. This amply suffices for peptonising one pint of milk. The directions for use are simple and can be followed without difficulty.

This preparation can be used for making not only peptonised milk but peptonised gruel, peptonised soups, peptonised jellies, peptonised blancmanges, peptonised beef-tea, and even peptonised milk punch. This special mode of treatment is indicated in cases of dyspepsia, acute or chronic, in gastric ulcer or cancer, phthisis, diabetes, marasmus, and a number of other diseases. In the case of children it is found to act admirably. The Extractum Pancreatis (Fairchild) in bulk or in tubes can be obtained from Messrs. Burroughs, Wellcome, & Co., Snow Hill Buildings, E.C.

Benger's Liquor Pancreatis is another good preparation, and may be used in much the same way as the extractum pancreatis. From two to three teaspoonfuls, with a pinch of bicarbonate of soda, may be added to a pint of milk, diluted with a fourth its bulk of water, and warmed to a temperature of 140° F. It forms a useful addition to nutrient enemata. It may be obtained of Messrs. Mottershead & Co., of Manchester.

Savory & Moore's Succus Pancreaticus, or Essence of Pancreatine, is a somewhat similar preparation. It is commonly used in connection with the portable peptonising apparatus recently introduced by this firm. The whole process of peptonising food can be carried on in the sick room without mess or trouble of any kind.

Pepsine in Scales (*Fairchild*) is a new and most valuable preparation. It possesses great activity, and may be employed with confidence in all forms of dyspepsia, whether acute or chronic. It has been largely used in the treatment of ulcer and cancer of the stomach in many of the London hospitals, and the published reports speak well of it. It has been found experimentally that one grain in eight fluid ounces of water, with forty minims of hydrochloric acid, will in four hours dissolve 1,000 grains of coagulated albumen at the temperature of the body. It may be obtained from Messrs. Burroughs, Wellcome, & Co., of Snow Hill Buildings, E.C.

There are many special preparations of peptonised or pancreatised food, and some of them are convenient for use and at the same time thoroughly trustworthy.

Benger's Peptonised Beef Jelly is a delicately flavoured, concentrated, partially digested, and solidified beef-tea. It contains the fibrin and flesh-forming elements of the beef in a soluble condition fit for immediate absorption. It may be taken cold, a teaspoonful at a time, or it may be dissolved in a little hot water. It is invaluable, not only in convalescence from acute diseases, but as a restorative for old people whose digestive powers are enfeebled. It is made by Mottershead & Co., of Manchester.

Darby's Fluid Meat is a well-known and valued preparation. It contains all those constituents of fresh meat which are useful as nutritive agents. It is prepared in the form of a moist extract perfectly soluble in water. It has a full meaty flavour like roast beef, and is taken without difficulty. It may be eaten spread on bread and butter or biscuit, or dissolved in water as a substitute for beef-tea. A good gravy soup may be made as follows:—Take a little carrot, turnip, onion, and celery, with a clove, small piece of mace, and pepper; boil gently, strain, and for each half-pint of liquor add a tablespoonful of fluid meat with a little salt. It may also be used in the preparation of vermicelli and other soups. It is sold by Messrs. Savory & Moore, 143 New Bond Street, W.

Valentine's Meat Juice is the juice of meat expressed by a powerful hydraulic press. It contains a large quantity of albumen in solution, with some hæmoglobin. It may be regarded as a concentrated and easily assimilated form of nutriment. The flavour of the meat is admirably preserved, and the preparation is useful as a stimulant and food. It may be obtained of Messrs. Corbyn, Stacey, & Co., 300 High Holborn.

The preparations of the Maltine Manufacturing Company, Limited, are so well known as hardly to require detailed notice. One of their chief preparations is the concentrated food, known as Beef Peptonoids, which is shown by analysis to contain 70 per cent. of peptonised albuminoids with phosphates, fat, and carbohydrates in suitable proportions. There can be no doubt that a food having this composition would be found of much value in the sick chamber. Another well-known preparation, issued by this company, is a peptonised cod-liver oil and milk. The necessity for obtaining cod-liver oil in a form in which it can be readily absorbed, and containing the greatest amount of nourishment, has long been recognised. In this preparation, both the oil and milk are perfectly digested. The maltine of the Maltine Company differs from other preparations of malt in being made from wheat, barley, and oats. It is difficult to over-estimate the value of extract of malt as a therapeutic agent.

These preparations are infinitely superior to *Liebig's Extract*, which contains only extractive matters and no albuminous principles. It consists, in fact, of the products of muscular waste. Attention has of late been called to the fact that beef-tea possesses little, if any, nutritive value. Mr. G. F. Masterman finds that even when most carefully prepared it does not contain more than 2 per cent. of solid matter, composed chiefly of kreatin, kreatinin, isolin, and decomposed hæmatin; that it is, in fact, analogous in composition to urine, excepting only that it contains less urea. Few people recognise the fact that the value of beef-tea is not as a nutrient but as a stimulant, and that it consists mainly of excrementitious materials. In milk, and especially peptonised milk, we have a cheaper and far more valuable nutritive agent. In many cases of Bright's disease, where the kidneys are taxed to the utmost to throw off metamorphosed substances, beef-tea, as an article of diet, must prove detrimental.

Brand's Essences, Entrées, Potted Meats, and Concentrated Beef-Tea are well-known and established favourites. The essences consist solely of the juice of the meat without the addition of water or any other substance. The sauces, chutney, and other flavouring agents will be found useful for those who are invalids, but who suffer from loss of appetite as the result of overwork or confinement to the house. They can be obtained from Messrs. Brand & Co., of 11 Little Stanhope Street, Hertford Street, Mayfair.

Burroughs' Beef and Iron Wine is undoubtedly useful. It is both a food and a tonic. In cases of general debility, it is a good plan to take half a wineglassful in a little water, with a biscuit, at eleven in the morning, or when fatigued from walking or exercise. It in a great measure replaces the old-fashioned steel wine, and is admirably adapted both for children and delicate women. It has been in use now for some years, and has obtained a high reputation both as a food and as a medicine. It is made by Messrs. Burroughs & Wellcome, of Snow Hill Buildings, E.C.

Starch, the second great constituent of a healthy dietary is, when cooked, converted by the diastase of the saliva or pancreas into dextrine and maltose. When the conversion of insoluble starch into soluble sugar does not take place, this important element of food is not assimilated, and the patient rapidly loses flesh. When the natural diastase is at fault, or is deficient in quantity, it is necessary to supplement it by taking extract of malt, which contains a ferment (diastase) identical in properties with that contained in the natural secretions. A teaspoonful of the *Kepler Extract of Malt*, taken immediately after meals, or, better still, mixed with the food itself, will do all that is necessary. It must be remembered that the ferment is destroyed by high temperature, so that, although it is advisable that the food should be taken warm, it must not be hotter than can be borne with comfort. Extract of malt may be taken in warm milk or in soda-water, or even spread over pancakes or apple fritters, or any similar article of diet. The *Kepler Extract of Malt* is undoubtedly the best, the richest in diastase, and the most largely used. We have witnessed the process of manufacture, have tested it, and are satisfied that it is not only unsurpassed but unequalled. It is the extract of malt which every physician now prescribes. It may be obtained from Messrs. Burroughs, Wellcome, & Co.

There are many other preparations of malt, one of the best known being Squire's *Superdiastatic Malt Extract*, the activity of which is very great. Savory & Moore's *Concentrated Pure Extract*, and Allen & Hanbury's *Extract* are also deserving of mention.

It must be remembered that, until about the seventh month, children are unable to digest starch matters, diastase existing in only very small quantities in their saliva and pancreatic juice. The food should therefore consist only of milk or of farinaceous material, either containing diastase, or predigested with extract of pancreas or extract of malt. There are several special foods for infants, many of which will be found useful from time to time.

Benger's Self-Digestive Food is an excellent preparation for infants, delicate children, and invalids.

It is a pancreatised farinaceous food, and contains natural digestive principles, which come into action immediately it is mixed with warm milk. It is made by Messrs. Mottershead & Co., of Manchester.

Savory & Moore's Food for Infants consists of broken and cooked grains associated with fresh malt diastase.

Allen & Hanbury's Malted Farinaceous Food is a palatable farinaceous food, digested by diastase. It may be regarded as a new and improved form of Liebig's well-known food. It is ready for use without boiling or straining. It is made by Messrs. Allen & Hanbury, of Plough Court, Lombard Street, E.C.

Squire's Food for Infants is a preparation which is certainly deserving of attention. It has been submitted to Dr. Wynter Blyth, the Medical Officer of Health for Marylebone, for analysis, and has been found to have the following composition :—

		Per cent.
Water		6·50
Fat		1·45
Nitrogen, soluble in cold water	·45	1·06
Nitrogen, insoluble in cold water	·61	
Amount of substances soluble in cold water (of which 1·37 is sugar)		18·04
Amount of substances soluble in water by digesting for three hours in an incubator at 98° 8 F.		37·76
Ash		1·07

The constituents which have not been directly determined are mainly starch and cellulose.

On mixing the food with water we find that a pleasant malt-like odour is evolved, and it is evident that the incorporation of the constituents is very complete. The value of such a food is obvious. It is made by Messrs. P. & P. W. Squire, 413 Oxford Street, W.

Koumiss, or Fermented Cows' Milk, is an effervescent preparation of milk, in which the albumen and casein are partially digested by a natural process. The carbonic acid which it contains acts as a sedative to the mucous membrane of the stomach, and it is often retained when beef-tea and other articles of diet, even in the smallest quantity, are rejected. Koumiss does most good in cases of great emaciation, chronic vomiting, ulcer of the stomach, acute dyspepsia, and all forms of renal disease. It is moderate in price, and is supplied daily, or as requested, by the Aylesbury Dairy Company, 31 Petersburg Place, Bayswater, W.

Artificial Human Milk is a preparation in which the various component parts of cows' milk are modified so as to be absolutely identical with those of human milk. This artificial milk is most essential for children who cannot take the breast, and it will prove beneficial for older children, and even for adults in whom the digestive powers are much impaired. It can be obtained of the Aylesbury Dairy Company.

Peptonised Milk may be readily prepared at home; but, for those who object to a little trouble, the special preparation sold under this name by the Aylesbury Dairy Company will be found useful.

The First Swiss Alpine Milk is undoubtedly a most valuable addition to our list of remedial agents. It differs from other condensed milks in being absolutely free from the addition of any substance whatever. It may be obtained from Messrs. Hartmann, Roll, & Co., of Denman Street, London Bridge, E.C.

Bolanachi's Chocolate is composed of cocoa and ceratonia bean (*Ceratonia siliqua*) only, and is free from flour, added starch, and impurity of all kind. It is palatable, and is well adapted for children and invalids. We have tried it and think well of it.

We have received from Mr. George Mason of 417 King's Road, Chelsea, samples of his Essence of Beef, Concentrated Solidified Extract of Beef, and Savoury Meat Lozenges. We have as yet had very little opportunity of giving them a trial, but we have no doubt from what we have seen that they will be of use to invalids. The lozenges have a distinct meaty taste, and in price compare favourably with the older and better known brands.

SURGERY.

RECENT PAPERS.

3556. **ALLEN.**—Skin-grafts from the Frog. (*Lancet*, Nov., p. 875.)

3557. **LISTER.**—Corrosive Sublimate as a Surgical Dressing. (*Brit. Med. Jour.*, Oct., p. 803.)

3558. **ROGERS-HARRISON.**—Spontaneous Amputation. (*Lancet*, Nov., p. 873.)

3559. **BROWNE.**—Treatment of In-growing Toe-nail. (*Brit. Med. Jour.*, Nov., p. 857.)

3560. **BARWELL.**—Chronic Articular Disease. (*Lancet*, Nov., p. 763.)

3561. **HARRISON.**—The After-treatment of Lithotomy where the Bladder is Sacculated. (*Lancet*, Nov., p. 819.)

3562. Pruritus Ani. (*Brit. Med. Jour.*, Nov., p. 1110.)

3563. **JENNINGS.**—Resection of Intestine. (*Lancet*, Nov., p. 907.)

3564. **ASHHURST.**—The Treatment of Carbuncle by Compression. (*Philadelphia Med. Times.*)

3565. **WASHBURN.** — Carbolic Acid Injections in Hæmorrhoids. (*Philadelphia Med. Reporter*, Aug. 16.)

3566. **DUNCAN.**—Laceration of the Trachea. (*Brit. Med. Jour.*, Nov., p. 961.)

3567. **RICHARDSON.**—Irreducible Hernia treated by Aspiration. (*Brit. Med. Jour.*, Nov., p. 961.)

3568. **TANNAHILL.**—Treatment of Phimosis without Operation. (*Brit. Med. Jour.*, Nov., p. 1013.)

ART. 3556. *Allen on Skin-grafts from the Frog.*—Dr. Allen, in the *Lancet*, Nov. 1884, p. 875, writes that he has obtained remarkable results in the treatment of granulating wounds, by grafting pieces of the skin of the frog. The skin-grafts from the frog retain their vitality for a considerable time, and can be carried some distance in the surgeon's pocket, wrapped in gutta-percha. Apart from the surgical importance connected with the process, there is something of a scientific interest in it. The grafts themselves do not grow when applied to a wound, but the cells round the edges of the ulcer take on an active development, and suggest to the author that the process of skin-healing by grafts might be due to the existence of sexes in the tissues. The colonies of epithelial corpuscles at the edges of the ulcer remain quiescent through lack of one sexual element, which the grafts no sooner supply than reproduction rapidly sets in, fertilisation being probably brought about through the medium of the fluid which bathes the surface of the granulations.

3557. *Lister on Corrosive Sublimate as a Surgical Dressing.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 803, a full account is given of an address delivered at the Medical Society of London by Sir Joseph Lister, on corrosive sublimate as a surgical dressing. The author states how he has been lately disappointed in the results of several wounds dressed with eucalyptus gauze, and under the strictest antiseptic principles. The failure was found to be due to the external gauze, which had not been manufactured properly; during the preparation, too much time had elapsed before the gauze was folded up, and evaporation of the eucalyptus oil had taken place to such an extent that it was practically absent in the dressings. Sir Joseph Lister then saw that there were many disadvantages connected with the use of volatile substances as antiseptics, and after much consideration found that in corrosive sublimate we have a most valuable non-volatile antiseptic. When the author first used dressings soaked with the corrosive sublimate, the skin often became irritated, even when the amount of corrosive sublimate was very small; but on working out his experiments he discovered that, if serum were mixed with the corrosive sublimate, the dressings were much less irritating, and that three parts per cent. of drug produce no irritation. The serum is readily obtained from any horse-slaughterer; the corrosive sublimate, when thus mixed with the serum in the proportion of 1 to 100 or 1 to 50, can be borne by most patients, and is a most trustworthy and unirritating antiseptic dressing, used on gauze in lieu of eucalyptus oil.

3558. *Rogers-Harrison on Spontaneous Amputation.*—In the *Lancet*, Nov. 1884, p. 873, reference is made to a paper read by Mr. Rogers-Harrison at the Medical Society of London on a peculiar case of spontaneous amputation. The patient was a gentleman, aged 78, who suffered from pain in the leg, which came on suddenly. When first seen by Mr. Rogers-Harrison, the limb was cold, tense, and painful, with [blackness at the end of the great toe. Six months after the beginning of the disease, the mummified sequestrum, consisting of foot and leg, broke off of its own accord. The stump was trimmed, and a good recovery followed. The cause was probably embolism of the femoral artery. [In the *Lancet*, August 1873, pp. 189 and 223, Assistant-Surgeon Curran contributes some cases of what he terms 'spontaneous amputation.' One occurred in a Hindoo girl aged nine, whose left leg was partly torn away by a crocodile, leaving a portion of the femur protruding beyond the flesh. The stump becoming black and offensive, it was decided to remove some of the dead and stinking tissues. No sooner was the end of the bone laid hold of for the purpose of sawing it off, than the whole femur came away from the socket at the hip-joint, thus constituting what Surgeon Curran terms a natural amputation. The ragged and protruding flaps of skin were pared down, and the child recovered with an excellent stump. Another case recorded was that of a girl, aged about six years, who was seized with acute pain in the left leg, which swelled greatly and soon became gangrenous; then a line of demarcation became established a little below the tuberosity of the tibia, the bones lost their vitality, and finally gave way during the night, without any conscious suffering or effort on the part of the child. There was no bleeding at any time. What remained of the skin and other structures was trimmed up, and a good recovery was made. The gangrene was doubtless due to embolism, or to some morbid condition of the blood, the consequence of insufficient food or of illness. Dr. Murchison, after describing the case of a man, aged 20, who suffered from an attack of gangrene of the foot during an attack of relapsing fever, says 'gangrene of the limbs is an occasional and well-known sequel of typhus and enteric fevers, and is always due to obstruction of the arterial trunks.' Vide *Medical Digest*, sects. 177 : 5 and 1629 : 1.—*Rep.*]

3559. *Browne on Treatment of In-growing Toe-nail.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 857, Dr. Walton Browne advocates the operation introduced by Mr. Stilwell for in-growing toe-nail, and mentioned in the *Brit. Med. Jour.* of 1872. The operation consists in removing all the granulations and hypertrophied skin, together with a large portion of the surrounding sound structures, from the side of the toe, sometimes making an open wound an inch long and three-quarters of an inch wide; then pads of lint, saturated with compound tincture of benzoin, are applied to the wound. By this means all the diseased parts are removed at once, and a clean healthy wound left to heal by granulation. As contraction takes place, the nail is left perfectly free, and there is nothing into which it can be pressed, so that recurrence is impossible.

3560. *Barwell on Chronic Articular Disease.*—In the *Lancet*, Nov. 1884, p. 763, is published a lecture by Mr. Barwell, concerning the management of two principal forms of chronic articular disease; (1) that arising in the bone, and (2) that commencing in the synovial membrane. The author takes a case, in which he supposes that a certain portion of bone is enlarged, painful, and particularly sensitive to pressure; that the pain augments at night, and the limb starts violently just as the patient is falling to sleep, and the skin over the tender point of bone is red. These symptoms show that suppuration is imminent or has already commenced. This is the time for the surgeon to step in, and he should choose a point whence he can reach the bone without opening the synovial cavity; and here, turning aside a little flap of soft parts, together with the easily detached periosteum, he may with a small trephine-head make an opening in the bone. While this is being done, he must observe what sort of fluid flows. If it be not pus, he must explore with a needle until pus is reached, or until it is certain that no pus has formed. Pus, when present, should be detected and eliminated; but the treatment answers just as well if pus have not already formed. After having established an opening, it should be kept open by means of a drainage-tube, so as to allow the cavity to heal with granulation from the bottom. The author next goes on to the treatment of the sluggish form of synovial disease met with in strumous subjects, where there is a persistent tendency to the growth of flabby granulations which may ultimately undergo suppuration. In these cases, the greatest value will be found in applying pressure to the affected part. This may be done by means of ordinary strapping, or by strapping one of the medicated plasters over the joint. The strapping should be often changed so as to make the pressure equable as well as persistent, and in many cases this is best attained by using a bandage of elastic webbing. If the swelling be large and soft, mere pressure is rarely sufficient; but the granulations must also be stimulated, and this is effected by injecting among them a solution of some slight irritant. The best fluid to use is tincture of iodine, beginning with half a drachm to the ounce of distilled water, and increasing up to two drachms. From one to two drachms are generally sufficient, and this may be repeated once or twice a week. The limbs must be placed in the most advantageous position, as a certain amount of stiffness is bound to follow; and great care must be taken to prevent as much as possible the limb from becoming fixed in any awkward position.

3561. *Harrison on the After-treatment of Lithotomy where the Bladder is Sacculated.*—Mr. Reginald Harrison, in the *Lancet*, Nov. 1884, p. 819, contributes a short article on the after-treatment of cases of calculi in sacculated bladders. The author says: 'To remove a calculus out of a pouch or depression in the bladder, and not at the same time to provide against urine lodging in the cavity thus formed for its reception and decomposition, is to incur a risk of cystitis and septicæmia, which is by no means an imaginary one.' The plan adopted is, in the first place, to take care that the prostate is sufficiently divided to allow free access to the bladder in all instances of stone complicated with a large prostate, and with saccules on a depressed floor. In cases where lithotomy has been performed, an ordinary catheter is passed through the lithotomy-tube; this can be made to enter any saccule which may be present. By thus having a double tube, a constant system of drainage is carried on, and no urine can be retained in the bladder. The advantages derived from using the double tube are—1. the prevention of vesical colic and spasm by retention of clots and the plugging of the ordinary tube with blood; 2. the more perfect drainage of the floor of the bladder, however irregular this surface may be; 3. a ready mode of washing out all parts of the bladder without removal of the outer tube; 4. increased facilities for keeping the patient dry, by having the inner tube sufficiently long to conduct the urine into a vessel by his bedside. When there is much vesical mucus of a thick ropy character, it is best to use as a solvent a solution of common salt and warm water, and to wash the bladder with this, until the mucus has disappeared.

3562. *Pruritus Ani.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 1110, a correspondent writes that he has found great use from the following mode of treatment in cases of pruritus ani. The patient having sponged himself well with warm water should syringe some up the rectum; then soaking a pledget of cotton wool in the following lotion, he should pass it well up the anus, leaving it there till he next defecates, when it must be renewed. ℞ Acidi carbol. gr. xx.; tincturæ opii ʒiv.; acidi hydrocyan. dil. ʒij.; glycerini ʒiv.; aquam ad ℥vj.

3563. *Jennings on Resection of Intestine.*—In the *Lancet*, Nov. 1884, p. 907, Mr. C. E. Jennings publishes an account of some experiments, performed at the suggestion of Sir Spencer Wells, to test the value of a method for removing portions of intestines. The results of three experiments on dogs are recorded. In the first case, a piece of the sigmoid flexure was withdrawn and isolated, through an incision in the linea alba, and passed through a small aperture made in the centre of a sheet of carbolised gutta-percha tissue. A piece of the gut about two inches in length was secured by two ligatures. A triangular portion of the mesentery was then excised, and all bleeding points secured. The intestine was next cut through with scissors above and below the lower ligature. A cocoa-butter cylinder being inserted to facilitate the application of the sutures, the edges of the bowel were united at a point diametrically opposite to the mesenteric border, by Lembert's interrupted suture of fine carbolised silk. The remainder of the circumference was closed by means of two continuous sutures, which included the peritoneal and muscular tissues. The divided edges of the mesentery were united by chromicised catgut ligatures. The intestine (with the cylinder within it) was returned into the abdominal cavity, and the wound in the linea alba united with interrupted silk sutures. The animal did well for some hours, but got loose during the night, and died very shortly with symptoms of general peritonitis. The results of the experiments showed that there appears to be a great advantage in making the section of the abdominal wall directly over the part of the intestine to be removed. The application of the sutures is the most important point for consideration. Braided silk is to be preferred, for it will not kink. Continuous sutures can be applied more speedily than interrupted ones; but, if one point give way, the entire suture loosens. [In the LONDON MEDICAL RECORD, 1883, p. 503, Dr. Hohenhausen's experiments with balls of flour, glazed with white of egg as a foundation upon which to introduce the sutures, may be read with interest in connection with Mr. Jennings' experiments.—*Rep.*]

3564. *Ashhurst on the Treatment of Carbuncle by Compression.*—In the *Philadelphia Med. Times*, Dr. Ashhurst writes that there are some peculiarities which occur in the ulceration of a carbuncle which have only lately been understood. The ulceration causes a sieve-like appearance of the surface, on account of the pus of the carbuncle making its way to the surface along the little columns of fat which connect the deeper tissues with the surface skin. In regard to treatment, the author prefers applying strips of adhesive plaster concentrically, as in the treatment of swollen testicle. They are first applied at the margin, and gradually brought more and more inwards, leaving a space in the centre to allow the slough to come out. From the time of application the spreading of the carbuncle is arrested, and the pain is greatly relieved. The carbuncle rapidly diminishes in size, and over its centre a small poultice is applied, which after a while is changed for resin or zinc ointment. [The treatment by pressure, since Hilton and Ferrall recommended it in 1860 (vide *Medical Digest*, sect. 56 : 4), has met with many followers. Few methods succeed so well as painting collodion for half an inch beyond the inflamed margin, reaching to near the apex of the carbuncle. A poultice can be readily used with the collodion.—*Rep.*]

3565. *Washburn on Carbolic Acid Injections in Hæmorrhoids.*—In the *Philadelphia Med. Reporter*, Aug. 16, 1884, Dr. Washburn states that it is not a dangerous practice to use carbolic acid injections in hæmorrhoids, provided the proportion of acid used be not too large. If it be desired to slough out a tumour by means of the acid, it is necessary to use one part to two parts of sperm-oil; but, if only absorption be wanted, then one part in four must be used. Should the patient be very sensitive to pain, only five to fifteen drops of the solution must be injected, and this may have to be repeated two or three times before a cure is effected. To prepare the injection, the acid is dissolved by heat and measured with the oil into a phial. This is then placed in a warm bath. The water is brought to boiling point, after which the acid and oil will not separate. It is necessary to have the bowels well emptied before the operation, and to keep them confined and free from pain by means of morphia for at least twenty-four hours. The needle should be inserted so as to deposit the fluid in as nearly the centre of the tumour as possible. Only one tumour should be operated upon at a time, an interval of about two weeks being allowed between each operation. [Vide *Medical Digest*, sect. 896 : 2.—*Rep.*]

3566. *Duncan on Laceration of the Trachea.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 961, Dr. P. T. Duncan reports the case of a young man, aged 22, who, whilst playing at football, received a violent backward blow on the neck. Examination half an hour afterwards revealed considerable swelling, chiefly at the lower part on the left side, but extending so as almost to obliterate the outlines of the trachea and larynx. It was soft, crepitant, and evidently due to emphysema. Absolute rest was enjoined, and an ice-bag kept constantly applied. The head was supported on each side, and all talking prohibited, and, as far as possible, swallowing. After two or three days the symptoms gradually improved, and, fourteen days after the injury, there was neither swelling nor tenderness on pressure, but only slight huskiness of the voice, which soon passed away.

3567. *Richardson on Irreducible Hernia treated by Aspiration.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 961, Dr. C. B. Richardson records the notes of a case of irreducible hernia treated successfully by aspiration. A lady, aged 68, was seized on Sept. 17 with colicky pains, nausea, and vomiting; and on examination a small femoral hernia was detected on the left side. It was not reducible; and in a few hours it increased to the size of a small orange. There was no stercoraceous vomiting, but the patient was in a very prostrate condition, and all attempts at taxis failed. It was then determined to introduce a hypodermic needle into the tumour with a view of withdrawing some of the flatus. This was done, and a good deal of flatus rushed out, reducing the tumour considerably, and by careful manipulation for about ten minutes the hernia then went back. Opium was given, and the patient made a speedy recovery. [A large number of similar observations are noted in sect. 952 : 1 of the *Medical Digest.*—*Rep.*]

3568. *Tannahill on the Treatment of Phimosis without Operation.*—Mr. T. F. Tannahill, in the *Brit. Med. Jour.*, Nov. 1884, p. 1013, writes that he believes the operation for phimosis can be so simplified as to render the use of instruments unnecessary. In one case, the author directed the patient to seize the foreskin on each side between the index finger and thumb, then to stretch the membranes lying between the right and left thumbs. This was frequently repeated. In several weeks the cure was complete. In another case the same method was adopted, but was supplemented by ordering the patient, during micturition, to compress the orifice of the foreskin, so that the urine exerted considerable pressure and stretched the membranes.

RICHARD NEALE, M.D.

MEDICINE.

RECENT PAPERS.

3569. Chylous Fluid in the Abdomen. (*Boston Med. and Surg. Jour.*, Aug. 14.)

3570. BRADBURY.—Ulceration of the Cæcum with Pyæmic Abscesses in the Liver. (*Med. Times and Gazette*, September, p. 450.)

3571. FINLAY.—Perforation of the Vermiform Appendix with Peritoneal Abscess. (*Brit. Med. Jour.*, October, p. 762.)

3572. NOTHNAGEL.—Winter Hæmoglobinuria. (*Med. Times and Gazette*, September, p. 425.)

3573. MYRTLE.—On Sweating to Death. (*Brit. Med. Jour.*, Nov., p. 846.)

3574. JESSETT.—Aspiration in Diagnosis. (*Brit. Med. Jour.*, Nov., p. 850.)

3575. RICHARDSON.—A Case of Extreme Portal Congestion. (*Asclepiad*, Oct., p. 306.)

3576. RICHARDSON. — Sphygmographic Aneurismal Tracings as Diagnostic Signs. (*Asclepiad*, Oct., p. 354.)

3577. NEGEL.—Ephemeral Œdema of Gouty Origin. (*Le Progrès Méd.*, No. 43, 1884.)

3578. GROCCO, P.—On Peptonuria. (*Annali Univ. di Med.*, Aug. 1884.)

3579. CARVALLO, C. T.—Rheumatic Glossitis. (*La Cronica Médica Lima*, Aug. 1884.)

3580. DAGINO, MANUEL.—On some Important Points in the Study of Yellow Fever. (*El Ensayo Medico, Caracas*, Aug. 16, 1884.)

3581. CELLI AND GUARINERI.—On the Prophylaxis of Tuberculosis. (*Archiv. per le Sci. Med.*, and *Gazz. Med. Ital. Prov. Venete*, Oct. 25, 1884.)

3582. VISHNEVSKY, F. D.—Ascarides as a Cause of Tetanus, Chorea Minor, and Perforation of the Bowel. (*Vratch*, No. 29, 1884, p. 581.)

ART. 3569. *Chylous Fluid in the Abdomen.*—In the *Boston Med. Jour.*, Aug. 14, 1884, a case is recorded of a man, aged 55, who experienced a sudden severe pain, shooting from the lower part of the back forwards through the abdomen, accompanied with vomiting. A tumour was detected at the lower part of the abdomen, giving the idea of a distended bladder, but this the catheter failed to dispel; therefore it was aspirated, and four pints of milky fluid were drawn off. Entire relief was obtained, and the tumour collapsed. Similar attacks were experienced at intervals of five or six months subsequently, but the quantity of fluid diminished on each occasion. The fluid withdrawn presented the general appearances of milk. It was an emulsion of very finely divided fat, containing numerous granular corpuscles of various sizes, a little cholesterine, and a considerable amount of albuminous substance, resembling casein; no urea, no urinary pigment. [Several analogous cases are noted in sect. 999 : 4 of the *Medical Digest.*—*Rep.*]

3570. *Bradbury on a Case of Ulceration of the Cæcum with Pyæmic Abscesses in the Liver.*—In the *Med. Times and Gazette*, September 1884, p. 450, a case is reported by Dr. Bradbury, of an engine-driver, aged 30, who on April 25 complained of a pain in the left side of the abdomen. During the following week he had two or three violent fits of shivering and vomiting, and lost flesh rapidly. On May 28 he was admitted into hospital. The temperature was 101°·8; pulse 84; skin hot; tongue dry and brown. A patch of dulness was detected over the base of the left lung behind, with deficient breathing and fremitus. Liver dulness was normal. There was no albumen in the urine. On June 2 the patient had a rigor, with pain in the abdomen and diarrhœa, and profuse sweatings afterwards. The rigors and sweats were repeated for several days, and the temperature-chart showed great diurnal variations, on one occasion dropping from 106°·6 to 96°·4 in less than twelve hours. On June 25 the abdomen became much swollen and very tender; peritoneal friction was perceptible over the upper part. On July 9 he was seized with sudden recurring pain, near the right nipple, accompanied with dyspnœa and friction-sounds. On July 10 there was extensive effusion into the right pleural cavity, and on July 16 the patient died. The *post mortem* examination showed the right chest to be full of pus, and a communication was found to exist with an abscess in the liver. The liver contained many abscesses, the largest being about the size of a lemon, which had burst through the diaphragm. The cause of the fatal pyæmia was found to be an ulcer in the intestine, close to the junction of the vermiform appendix and cæcum. The hæmorrhoidal veins, and the inferior mesenteric vein, were filled with broken-down clots and pus. There was no evidence of any disease in the rectum or small intestines.

3571. *Finlay on a Case of Perforation of the Vermiform Appendix, with Peritoneal Abscess.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 762, is reported a case described by Dr. D. W. Finlay at a meeting of the Clinical Society of London. A man was admitted into the Middlesex Hospital, complaining of severe pain over the whole abdomen, which was moderately distended, tender, and tympanitic. The tongue was dry and coated, temperature 99°·6, pulse 96. The illness came on a week before admission, with griping pains across the lower part of the abdomen, followed by vomiting, headache, and diarrhœa. Five days after admission he was seized with pain in both parotid regions, and this was followed by swelling and tenderness, with inability to open the mouth. Both swellings suppurated, and were incised; his temperature rose slowly, and he became delirious, and died, somewhat suddenly, twelve days after admission. There were no rigors. The *post mortem* examination revealed three large, and as many smaller, abscess-sacs within the peritoneum; the oldest being round the vermiform appendix, which was perforated about half-way from its attachment. There was no sign of recent inflammation, and it seemed as if the mischief were of old standing, and that adhesions had formed round the perforation, which had prevented for a time the fatal result.

3572. *Nothnagel on Winter Hæmoglobinuria.*—In the *Med. Times and Gazette*, Sept. 1884, p. 425, a clinical lecture by Professor Nothnagel is reported. The author exhibited a patient suffering from a rare complaint. When he goes out in the cold in winter, and his feet are chilled, he suffers from peculiar sensations; he is seized with a shivering throughout the whole body, and afterwards feels hot and perspires profusely. During the attack he suffers from great thirst as long as the shivering lasts. If he pass urine immediately after an attack, the urine is black, but what he passes subsequently is clear. On examination, no red blood-corpuscles can be detected, but only the presence of blood-pigment existing free in the liquid, and not in combination with red blood-corpuscles. It is supposed that the influence of cold destroys the blood-cells and causes the corpuscles to be broken up, and the hæmoglobin is set free in the blood. The hæmoglobin is said to have an influence on the vaso-motor centre; hence the shivering, followed by heat and perspiration.

3573. *Myrtle on Sweating to Death.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 846, Dr. Myrtle reports the case of a man, healthy and active, who, after suffering for three weeks from pains of rheumatic character, relieved by sodium-salicylate, was seized with profuse sweats, frequently of most offensive character, and lasting at times for ten hours. Atropine and ergotine both caused sudden symptoms of collapse. Arsenic was then tried, and for a time the patient improved, and the perspiration lost its fetor. The patient, however, died 121 days after he had first felt the flying pains. No necropsy could be obtained. The author regards the case as one of paresis of nerves supplying the sweat-ducts, caused by frequent exposure to cold during his employment.

3574. *Jessett on Aspiration in Diagnosis.*—In the *Brit. Med. Jour.*, November 1884, p. 850, Mr. F. B. Jessett contributes an able paper on the use of the pneumatic aspirator as a means of diagnosis and treatment in disease. A history of the various modifications of the aspirator commences the paper; then cases are cited showing how valuable the aspirator has proved as a means of diagnosis, especially in tumours of the abdomen. One case presented all the symptoms of abscess of the liver, but an aspirator was introduced in six different places with a negative result, thus proving the diagnosis of abscess to be incorrect. Another case reported was that of a lady who was supposed to have cancer of the liver, but Mr. Jessett thought it was only a collection of fæces, and treated the patient with large enemata, so that she was well in a few days. This case is recorded to show how the use of the aspirator would have led to a correct diagnosis in the first instance. As a means of treatment, the diseases in which aspiration may be employed with success are divided into five groups:—1. Fluids accumulating in serous cavities—that is, hydrocephalus, hydrarthrosis, pleurisy, empyema, pericarditis, and effusion into synovial cavities; 2. fluids formed in deep parts of organs, abscesses in hydatid tissues of the lungs or liver, cysts of spleen, omentum, ovarian cysts, retention of urine, strangulated herniæ; 3. liquid formed within the cellular tissues of various regions, congestive abscess, bubo, perinephritic abscess, iliac or psoas abscess, periuterine abscess; 4. collection of air or gases in cavities or organs; *e.g.* pneumothorax, tympanites, and strangulated hernia; 5. removal of *débris* from the bladder after lithotrity, and diagnosis of tumour in the bladder.

3575. *Richardson on a Case of Extreme Portal Congestion.*—In the *Asclepiad*, October 1884, p. 306, Dr. B. W. Richardson contributes a paper on a case of extreme portal congestion, which was cured by copious accidental hæmorrhage. A gentleman, aged 65, consulted the author in March last concerning a series of symptoms, affecting his alimentary and portal systems. The chief symptom, however, was extreme distension of the abdomen from accumulation of flatus. Every remedy was tried that the author could think of, but nothing seemed to give relief, until one morning the patient, instead of waiting for Dr. Richardson to visit him, came to the consulting-room to say that whilst at stool a large quantity of blood had passed by the bowel, giving great relief to his symptoms. Next morning he was ordered to take a dose of castor-oil, and about a pint-and-a-half of blood was again evacuated. For a few days there was a little further loss of blood—an ounce or two with each action; but in a short time the patient became quite well and as active as he had ever been. The practical lesson to be learnt from the case is that the old custom of bleeding or cupping over the abdomen might here have been beneficial; but perhaps in this instance it would have been better to have applied leeches to the rectum.

3576. *Richardson on Sphygmographic Aneurismal Tracings as Diagnostic Signs.*—In the *Asclepiad*, October 1884, p. 354, Dr. B. W. Richardson writes that, in cases of doubtful aneurism of the great arteries in the cavities of the body, the sphygmograph comes into use with excellent effect. Take, says he, a tracing of the radial pulse, then one over the suspected pulsating part, and compare the two. If the tracings correspond, there is almost certain to be an aneurismal dilatation. If the pulsation were induced by a healthy artery pulsating beneath a tumour, or beneath an organ of the body—as the pancreas, liver, or stomach—the natural arterial tracing would not be educed; there would only be irregular up and down strokes. Wherever there is a direct arterial pulsation, a sphygmographic tracing will give the impulse-stroke, the recoil, and the notch, but no tumour over an artery will do this. The author quotes an example. He was consulted about a doubtful case of aneurism of the aorta, at the arch or at the innominate. The reading at the right radial pulse was very feeble, but distinct. A perfectly corresponding pulse-reading was obtained in the chest, at a point three inches above the right nipple, in a line drawn from that nipple to the origin of the left sterno mastoid. The pulse-reading here was much larger than that at the radial artery. The systolic line was longer, the angle was more acute, the diastolic or descending line was longer, the aortic cleft more defined. The inference drawn from these observations was, that there was an aneurismal dilatation in the ascending aorta, extending to the innominate, and interfering with the force of the arterial stroke through the right subclavian and its branches; a diagnosis which afterwards proved correct.

RICHARD NEALE, M.D.

3577. *Negel on Ephemeral Œdema of Gouty Origin.*—Negel, of Jassy (*Le Progrès Méd.*, No. 43, 1884), reports an interesting case of a lady, aged 40, strong and stout, who had been subjected to malarial influences, and who had complained at times of rheumatic pains, situated principally in the joints. She was, moreover, very nervous, but had never had chilblains. She was liable to gastric attacks, with vomiting, meteorism, and pain. Ten years ago, when bathing in a river, her whole body became swollen, and her skin itched violently. This accident did not recur till 1881. From that time, whenever she washed her hands in water at the ordinary temperature, in from two to five minutes she felt frightful itching in the fingers, sharp pain, a sensation of burning and constriction, like a 'biting heat'; some minutes after, the fingers swelled, becoming red and shining; the local temperature was a little raised. The swelling did not pit on pressure, but the redness disappeared to return immediately. At the end of one to three hours all had passed away. According to her own statement, this same swelling might occur in the feet, arms, nose, ears, or any part of the body. It might occur also from cold air or contact with any cold body; the nose or ears were often attacked when she went out of doors. The urine was free from albumen and sugar. On the supposition that the phenomena depended upon gout, salicylate of soda and liquor arsenicalis were prescribed, with two alkaline baths weekly. At the end of a month she was completely cured, the attacks no longer recurring under the influence of any of the above-mentioned causes.

ROBERT SAUNDBY, M.D.

3578. *Grocco on Peptonuria.*—In the *Annali Univ. di Med.*, Nov. 1883, Dr. Grocco published a paper on this subject, calling especially attention to the works of Hofmeister, Meixner, Jaksch and Poehl, and adding some original observations of his own. The various and even opposing conclusions at which the authors arrived, induced him to continue his researches on a large scale, and he now (*Annali Univ.*, Aug. 1884) publishes the results of his inquiries on 300 patients, of whose urine more than 700 analyses were made. Peptonuria is always to be considered as a morbid fact, and is altogether independent of albuminuria. Large quantities of peptones may be found in the urine without a trace of albumen, or albumen may be found without peptones. Peptonuria is as much a symptom of local disease as of general disease, infective or not. Among general peptogenic diseases are marsh-infection, typhoid fever, scurvy, purpura hæmorrhagica, septicæmia, and acute phosphorus poisoning; and if in many cases peptonuria expresses a profound alteration of molecular change (as in scurvy, purpura, malarial cachexia, and typhoid with very high temperature and adynamia), in certain cases this cannot be said, as in slight subcontinuous miasmatic fevers, for example. The local morbid processes which give rise to peptonuria are almost exclusively of inflammatory character and most often suppurative. Among local inflammatory processes, acute and subacute nephritis, the first especially, must not be omitted. Not all inflammatory processes, even when suppurative, give rise to peptonuria. In those of chronic course especially it is often absent. Very rarely, in malignant new growths of rapid development there may be peptonuria. In local processes, the hypothesis is probable that the peptones formed in the affected part pass into the blood and from the blood into the urine. In general diseases, the pathogenesis of peptonuria is unknown. Peptonuria cannot be regarded as a diagnostic symptom between simple exudation and purulent exudation. But it does help us to conclude with great probability, in cases of local disease, in which from the site of the disease and from its course the diagnosis is uncertain, that an inflammation, probably suppurative, rather than any other morbid state, exists. Peptonuria is very frequently met with in the period of resolution of pneumonia, but is not constantly present then, and moreover may be found before resolution occurs, or in the course of grey hepatisation. In pleurisy, peptonuria has no practical value as a guide to treatment.

3579. *Carvallo on Rheumatic Glossitis.*—J. L., aged 40, farmer, presented himself with symptoms of acute glossitis. The swelling of the tongue took place very rapidly, and in a few hours had become so great that the tongue protruded beyond the lips, which could not be closed. He breathed with great difficulty, and his face was cyanotic and pulse small. The saliva was abundant, and ran from his mouth, but the exposed surface of the tongue was dry and rough. Speech was impossible, and deglutition nearly so. There were none of the usual causes to account for the inflammation, but the patient had suffered from rheumatism, and at present complained of pain in the shoulder and muscles of the neck. Six leeches were applied behind the angle of the jaw to give immediate relief. Before resorting to deep incisions, in the absence of the usual causes of this affection, and taking into consideration its abrupt onset and the rheumatic history, Dr. Carvallo prescribed 4 grammes of jaborandi leaves in infusion to provoke free salivation and perspiration, to be followed by 6 grammes of salicylate of soda, to be taken in three doses during the night. The effect of these remedies was remarkable, and in two days the patient was well.

3580. *Dagino on some Important Points in the Study of Yellow Fever.*—Dr. Dagino, practising in Maracaibo, Venezuela, in which town yellow fever is endemic, finds that all unacclimatised new comers are equally liable to contract the disease; and this whether they are Europeans, native Indians, or inhabitants of the provinces of the interior. If anything, the native Indians, on coming to the town, suffer most, though they may come from a hotter locality. The lake of Maracaibo is 120 miles long from north to south, and its coast-line is little less than 300 miles. On its banks are many towns and villages. Maracaibo is situated on the mouth of the bay of that name, on the west coast. The next most important town is Altagracia, situated on the opposite bank. Yellow fever never arises except in Maracaibo. The focus of the disease seems to be on the shore adjoining the city, where all conditions favourable to the decomposition and fermentation of the animal and vegetable refuse of the town exist. The shore opposite the city, Los Haticos, only a few minutes off, and occupied by villas and pleasure-houses, is perfectly healthy, and new comers may live there safely. Jaccoud says that yellow fever never arises in coast towns of less than 6,000 inhabitants, and this certainly holds good of the lake of Maracaibo. The origin of yellow fever is essentially distinct from marsh fevers. It is contagious; one attack generally gives immunity. In marshy regions, where malarial fevers reign, yellow fever either does not exist, or occurs at different times from the paludic fevers.

3581. *Celli and Guarineri on the Prophylaxis of Tuberculosis.*—The authors have carried out a series of experiments in the S. Spirito Hospital in Rome, to determine the presence of tubercle-bacillus in the air. Their results do not agree with those of Dr. Theodore Williams in the wards of the Brompton Hospital. They never found the bacilli in the air of a ward containing tubercular patients, nor did they find them by cultivating sterilised gelatine on which tubercular patients had breathed, nor after allowing bacilli containing sputa to dry, nor after passing currents of air through and over such sputa. They affirm that in phthisical patients the expired air does not contain the bacilli of tuberculosis nor the tubercular virus; that the sputa, fresh or not, never give up the bacilli or virus to the air of the room, and that the air of rooms inhabited by the phthisical does not contain the bacilli nor the virus of tuberculosis. The authors promise further notice of their work in this direction. In another paper, 'On some Crystalline Forms which Simulate the Bacillus of Tuberculosis' (*Atti della R. Accademia dei Lincei*, 1883), they call attention to certain pseudo-bacillary forms, which give, with the method of Weigert, the same reaction as the bacillus of tubercle, and which also resemble it in form. These are crystals of palmitic and stearic acid, and perhaps also of tyrosin (these substances are often found in sputa, especially in phthisis), and are distinguished from the bacilli of Koch by not being sporigenous, by being rigid, straight, and of very variable length; they are of different shape and size, sometimes disposed in stellate rays, never in bundles, as are the bacilli. These crystals can be made to disappear by the addition of an alcoholic solution of potash.

G. D'Arcy Adams, M.D.

3582. *Vishnevsky on Ascarides as a Cause of Tetanus, Chorea Minor, and Perforation of the Bowel.*—In the *Vratch*, No. 29, 1884, p. 581, Dr. F. D. Vishnevsky, of Sapojok Zemsky Hospital, details three interesting cases, one of which refers to a boy, aged 14, with tetanus and trismus. Absence of any traumatic causes, an increase of convulsive symptoms when the patient was fasting, and the disappearance of dilatation of the pupils after meals, made the author suspect the helminthic nature of the disease. Accordingly, on the third day santonin was given. On the fourth, the patient discharged twenty-five long ascarides, and a great relief followed. On the sixth day the patient was well. In the second patient, a peasant woman, aged 20, ascarides produced severe chorea minor of two weeks' duration, with extreme prostration from sleeplessness. The choreic movements greatly lessened after the discharge of ten worms, and entirely ceased in another two days. The third patient, a peasant, aged 27, was brought into the hospital with general peritonitis. In four days after the first symptoms, the patient died. The *post mortem* examination detected seven ascarides in the peritoneal cavity. There were found three slit-like perforations in the intestinal walls, surrounded by a slight red halo and swelling. Any signs of ulceration, or any traces of fresh or old typhous, dysenteric, or tuberculous processes, were entirely absent.

V. Idelson, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3583. Richardson.—Disease from Bichromate of Potassa. (*Asclepiad*, October, p. 339.)

3584. Robson.—Irritation of the Skin following the Application of Vaseline as a Surgical Dressing. (*Lancet*, November, p. 822.)

3585. Richardson.—Mullein in Phthisis. (*Brit. Med. Jour.*, Nov. 1884, p. 907.)

3586. Whittle. — The Treatment of Cholera by Minute Doses of Calomel frequently repeated. (*Brit. Med. Jour.*, November, p. 929.)

3587. White.—Paracentesis Thoracis as a Therapeutic Agent. (*Brit. Med. Jour.*, November, p. 845.)

3588. Lee —On Ringworm. (*Med. Press and Circular*, November, p. 413.)

3589. Carey.—The Salicylic Acid Treatment of Enteric Fever. (*Med. Press and Circular*, November, p. 428.)

3590. Fothergill.—Malt-Extract as Food. (*Practitioner*, November, p. 340.)

3591. Sinclair.—The Use of Ichthyol in Eczema. (*Brit. Med. Jour.*, November, p 1013.)

3592. Trastor.—The Vapour of Glycerine in Obstinate Cough. (*Revue Méd.*)

3593. Grigorieff, A. Kh.—On the Treatment of Scabies. (*Kavkazsky Meditzinsky Sbornik*, 1884, No. 38, pp. 14-41.)

3594. Krasovsky, A. S.—On the Treatment of Cephalalgia of Malarial Origin. (*Vracheb. Vedom.*, 1883, No. 571, p. 4034.)

3595. Anfimoff, T. A.—On the Action of Burnt Alum in Malarial Fever. (*Proceedings of the Caucasian Medical Society*, 1884, No. 5, pp. 106–17.)

3596. Sher. — On Alum in Intermittent Fevers. (*Russkaia Meditzina*, 1884, No. 36, pp. 740-41.)

3597. SURIN.—On Burnt Alum in the Treatment of Malarial Fevers. (*Simbirskaia Zemskaia Gazeta*, Oct. 17, 1884, and *Vratch*, 1884, No. 43, p. 738.)

3598. BLUMENBERG, MRS. -On the Action of Cotoin. (*Vratch*, 1884, No. 39, pp. 662-3; No. 40, p. 684; and No. 41, pp. 701-2.)

3599. ROSTOSHINSKY, R. P.—On the Action of Hydrochinon on the Healthy and Diseased System. (*Proceedings of the Tambov Medical Society*, 1884, No. 6; and *Medits. Obozrenie*, 1884, No. 19, p. 632.)

3600. KRASNIKOFF, P. M.—On the Treatment of Hæmoptysis by Seeds of Lady's Thistle (Semen Cardui Mariæ). (*Proceedings of the Tambov Medical Society*, 1884, No. 7; and *Meditz. Obozrenie*, 1884, No. 19, p. 632.)

ART. 3583. *Richardson on Disease arising from Bichromate of Potassa.*—In the *Asclepiad*, Oct. 1884, p. 339, Dr. B. W. Richardson continues his researches on disease arising from bichromate of potassa. The first description of the local disease was given by the author in 1863 in the October number of the *British and Foreign Medico-Chirurgical Review*, and was founded on the report of a case by MM. A. Chevalier and Bécourt. One of these observers met with a man who was engaged in a manufactory of bichromate of potassa, and who was suffering from a peculiar ulceration of the face. Men working in these manufactories soon find they have lost the septum nasi; and if they have any abrasion on their hands they suffer great pain, followed by violent inflammation, but, as long as there is no abrasion of the skin, they can plunge their hands into a concentrated and hot solution without danger. Dr. Richardson narrates a few cases which have come under his observation, but considers the disease as rare. With regard to the treatment, the author does not believe that anything is of avail unless the cause of the evil be withdrawn, although solutions of subacetate of lead are useful in relieving the local irritation, and arresting the discharge. A very good coloured plate is given with the paper, showing the hands of patients affected with the disease.

3584. *Robson on Irritation of the Skin following the Use of Vaseline as a Surgical Dressing.*—Mr. Mayo Robson, in the *Lancet*, Nov. 1884, p. 822, writes that within the last two years he has noticed that severe inflammation of the skin has been set up by the application of vaseline as an ointment, which has subsided on applying some other simple dressing. The author records some cases, and supposes the irritation to be due to some impurity in the vaseline, or that some skins present the same idiosyncrasy to preparations of vaseline that others do to any application of tar, as in most instances the same vaseline was used in a number of cases without producing the slightest irritation. In subsequent articles, other observers have referred to cases where the use of vaseline appeared to irritate the skin in some instances, a fact quite explicable when it is known that many impure articles are often substituted; still, *pure* vaseline seldom acts injuriously.

3585. *Richardson on Mullein in Phthisis.*—Mr. J. B. Richardson, in the *Brit. Med. Jour.*, Nov. 1884, p. 907, writes that he has tried mullein-leaves in the treatment of phthisis, and has met with no success. He made experiments on eighteen persons, and found that they did not increase in weight when taking mullein-leaves boiled in milk any more than if they took milk only. The author, after trying the remedy for twelve months, has come to the following conclusions. 1. The taste of the leaves is very disagreeable, and it is difficult to get patients to take the mullein. 2. Mullein tends to do away with the appetite of patients taking it. 3. It does not so nourish the body as to cause increase of weight. 4. In the treatment of phthisis it is useless. [Dr. Quinlan, in a subsequent number, protests most earnestly against Mr. Richardson's conclusions as being quite contrary to the experience of himself and many others.—*Rep.*]

3586. *Whittle on the Treatment of Cholera by Minute Doses of Calomel frequently Repeated.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 929, Dr. E. Whittle relates the case of a lad, aged 19, who was taken ill with violent vomiting, purging, and cramps. A dose of Epsom salts was given him by his mother, making him much worse, and when seen by the author he was in a state of extreme collapse, and appeared to be suffering from Asiatic cholera, but for one symptom—viz., the coldness of the tongue, though marked, was not so marked as it would have been in true Asiatic cholera, accompanied by such collapse. Acting on the experience learnt in 1849 of over 500 cases, Dr. Whittle ordered at once hot applications to the feet and whole surface, and a large sinapism to the abdomen; also calomel 1 grain, opium 1 grain, dried carbonate of soda 12 grains, to be divided into twelve doses, one to be taken every quarter of an hour until vomiting ceased; then one every hour. Thin gruel with a little whisky was also ordered. In about three hours the patient was warm and comfortable, all pain had ceased, the purging was much less, and only one powder an hour was needed. The patient rallied completely by the evening, and made a good recovery, though he felt the effects of the attack for some time. [Since the value of calomel in the treatment of cholera was noted in sect. 925:4 of the *Medical Digest*, several suggestive papers have appeared in the *British Med. Journal*, Dec. 1883, p. 1053, Aug. 1884, p. 495; *Med. Times and Gazette*, Sept. 1883, p. 481; and *Lancet*, July 1884, p. 126.—*Rep.*]

3587. *White on Paracentesis Thoracis as a Therapeutic Agent.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 845, Dr. W. H. White discusses the treatment of effusion into the thorax. He classifies pleuritic effusions as follows:—1, serous or sero-fibrinous; 2, sero-purulent or purulent; 3, sanguineous. The latter class is rarely met with, being usually associated with malignant disease, or with aneurism, or with tubercular disease of the pleura. With regard to the site most suitable for the performance of paracentesis thoracis, the author prefers the sixth interspace on the right side, and the seventh on the left side, in the axillary region. There are two kinds of operation for pleuritic effusion—viz., the close and the open method. In the former the entry of air is prevented, whilst in the latter it is permitted with antiseptic precautions. Various ways under both methods are described by the author, and the paper ends with the following conclusions. 1. In pleuritic effusion, early evacuation of the fluid by the siphon principle is advocated, discarding the aspirator. 2. In empyema, pus should be withdrawn at once by the siphon, or by the aspirator, with the use of the manometer, and the pleural cavity irrigated. 3. Incision is called for where empyemata have existed for some time in old or rigid chests, or where irrigation, having been practised several times, has failed. 4. Where incision fails to effect a cure, resort must be had to resection of ribs. 5. Paracentesis, with drainage, should be employed in the treatment of lung-cavities.

3588. *Lee on Ringworm.*—In the *Med. Press and Circular*, Nov. 1884, p. 413, Dr. Robert Lee recommends the following prescription as useful even in the most obstinate cases. Let precipitated sulphur be mixed in a mortar with sweet oil, in the proportion of about half an ounce of sulphur to an ounce of oil, so that a thick cream is obtained. Then add to this mixture three drachms of Calvert's carbolic acid, No. 5 solution; that is, a mixture containing the acid in about the proportion of 20 per cent. This must be applied twice a day, night and morning, to the affected parts, and should be rubbed gently in with a finger on a piece of soft leather. The head should also be well washed and brushed with soap and hot water, two or three times a week; and, if the disease be of long duration, it is well to begin by ordering the whole head to be shaved.

3589. *Carey on the Salicylic Acid Treatment of Enteric Fever.*—In the *Medical Press and Circular*, Nov. 1884, p. 428, Dr. Carey writes that he has tried experiments with salicylic acid in cases of typhoid fever. One case in which he gave it was that of a girl, who presented all the premonitory symptoms of typhoid fever. The pulse was 120 to 130, the temperature from 102° to 104° F., with tenderness of the abdomen and diarrhœa. Ten grains of salicylic acid were given every two hours. In four days the pulse and temperature were normal, and all symptoms of the fever had disappeared. Another case recorded is that of a young lady, aged 25, to whom fifteen grains of salicylic acid were given every three hours, with a result similar to that of the first case. Dr. Jenkins, of Manchester, has lately published the results of some cases of typhoid fever treated successfully with salicylate of soda, and of others treated as well by Dr. Shelly with carbolic acid and tincture of iodine.

3590. *Fothergill on Malt-Extracts as Food.*—In the *Practitioner*, Nov. 1884, p. 340, Dr. Milner Fothergill contributes an article on the value of malt-extracts as food. By mixing malt-extracts with farinaceous food before it is eaten, or by taking them with such food, or before the stomach has become distinctly acid in the digestive act, they have been found of great use in the conversion of starch into grape-sugar. As a consequence, malt-extracts form a most useful food where the digestion is gravely impaired, whether in infants or in adults. The author states the case of a lady, who was rapidly wearing out by starvation owing to the weak state of her stomach, and was reduced to such a state that, when seen by Dr. Fothergill, he could suggest nothing but what had been tried before until he thought of malt-extract. She was ordered a teaspoonful of malt-extract every hour. The stomach tolerated it well, and she quite recovered. This patient lived *entirely* on the extract for about two weeks, and was then able to take other food in small quantity. Malt-extract mixed with a little milk is a splendid food for patients during the night. It can be prepared at bedtime, and kept near the bed in a hot-water jug under a cosey.

3591. *Sinclair on the Use of Ichthyol in Eczema.*—Dr. A. J. Sinclair, in the *Brit. Med. Jour.*, Nov. 1884, p. 1013, states that he has used ichthyol in several cases of eczema, and has met with a fair amount of success. He records the following case to show that it must be used with caution. A child, four months old, was suffering from chronic eczema of the head and extremities. An ointment of one part of ichthyol to five of vaseline was ordered to be rubbed over the parts affected. Within two hours of the application the child sank into a stupor, from which it could hardly be roused. This condition lasted twelve hours, and caused great anxiety, after which it gradually revived and made a complete recovery.

3592. *Trastor on the Vapour of Glycerine in Obstinate Cough.*—The *Revue Médicale* notes that Professor Trastor, of Nantes, employs the vapour of glycerine with great advantage when a cough becomes distressing or fatiguing. Fifty or sixty grammes are placed in a porcelain capsule, and evaporated over a spirit-lamp. A very large amount of vapour is disengaged. In phthisis and various other affections much relief is gained in this way.

Richard Neale, M.D.

3593. *Grigorieff on the Treatment of Scabies by Iodoform.*—In the *Kavkazsky Meditzinsky Sbornik*, No. 38, 1884, p. 14, Dr. A. Kh. Grigorieff, of Temir-Khan-Shura, furnishes details of seventeen cases of scabies which he treated by inunction of the following ointment: ℞ Iodoformi, ʒj.; Cerati simpl., ℥j.; Olei olivar. q.s. ut fiat unguentum. Cure followed, on an average, after seven inunctions, in five and a half days. From his observations, the author draws the following conclusions. 1. Iodoform rapidly kills scabietic parasites and their germs. 2. It greatly relieves itch from the beginning of the treatment. 3. It does not irritate the skin, and does not bring about any new rashes. 4. It deserves to be placed above all other remedies for scabies.

3594. *Krasovsky on Papaverin in Malarial Headache.*—In the *Vracheb. Vedom.*, 1883, No. 571, p. 4034, Dr. A. S. Krasovsky, of Batum, writes that he successfully treats malarial cephalalgia of moderate intensity by the administration of muriate of papaverin, one-sixth of a grain, in powder or in mixture, with hydrochloric acid, every hour until relief ensues. As a rule, papaverin causes also co-existing pain in the bones and in the calves of the leg to disappear.

3595. *Anfimoff on Burnt Alum in Malarial Fever.*—Dr. T. A. Anfimoff, of Stavropol. treated (*Proceedings of the Caucasian Medical Society*, 1884, No. 5) six cases of inveterate intermittent fever by burnt alum in eight-grain doses, two or three times a day, for sixteen to twenty successive days. The results were as negative as possible.

3596. *Sher on Alum in Intermittent Fever.*—In the *Russkaia Meditzina*, No. 36, 1884, p. 740, Dr. Sher, of Proskuroff, Podolsk Government, used alum, 8 grains two or three times a day, in 31 soldiers with intermittent fever of fresh standing. In 21 cases cure followed. In the remaining 10 alum failed, and cure was subsequently obtained by quinine.

3597. *Surin on Alum in Intermittent Fever.*—Dr. Surin, of Sengilei, Simbirsk Government (*Simbirskaia Zemskaia Gazeta*, Oct. 17, 1884. and *Vratch*, 1884, No. 73) tried the alum treatment (7 to 10 grains, twice a day) in 187 cases of malarial fevers, 99 of which were of quotidian type and 58 of tertian. Of 51 males and 48 females with quotidian fever, 33 (64·7 per cent.) and 32 (66·66 per cent.) respectively; and of 35 males and 23 females with tertian fever, 29 (82·85 per cent.), and 13 (56·52 per cent.) respectively, were cured. Dr. Surin recommends the combination of burnt alum with carbolic acid (1 drop of the melted crystallised acid to 7 or 10 grains of powdered alum). He used this combination in 32 cases out of 157, and obtained cure in 25.

3598. *Blumenberg on Cotoin.*—In the *Vratch*, 1884, Nos. 39, 40, and 41, Dr. Blumenberg, of Nicolaëvsky Military Hospital, St. Petersburg, describes at some length her observations on the action of cotoin (the active principle of coto bark, with the formula $C_{22}H_8O_6$) in cases of diarrhœa. She administered the drug *per se*, in powder, in doses of 2 to 3 grains, three times a day, for six to ten successive days, to fourteen patients, four of whom suffered from subacute intestinal catarrh, the remaining ten from chronic diarrhœa. The latter category included three cases of phthisical diarrhœa, one case of catarrh of the large bowel from *cercomonas intestinalis*, one of malarial catarrh of the colon, one of diarrhœa following typhus (of eight months' duration), one of diarrhœa coexisting with chronic nephritis, one of diarrhœa concurring with chronic peritonitis, two of chronic catarrh of the small and large bowels. Before the treatment by cotoin, the patients had suffered from diarrhœa from six weeks to one twelvemonth. Of all the cases, only two were cured by cotoin, both of them being instances of simple intestinal catarrh of six weeks' and three months' duration. In another case, that of a nephritic patient with diarrhœa, a very temporary improvement was obtained, which was followed by a return of the diarrhœa in a still worse degree, in spite of the continued use of cotoin. In the remaining eleven cases cotoin now and then improved the appetite, but never brought any improvement in the intestinal symptoms. On the contrary, in phthisical cases there was observed an increase of diarrhœa during the cotoin treatment. In these eleven cases, after cotoin had been discontinued, diarrhœa more or less rapidly yielded to the use of nitrate of silver, large doses of magisterium bismuthi, &c. As to accessory effects of the drug, the author noted the appearance of vomiting (after two doses of two grains) in one patient; and of giddiness, softness of the pulse, facial paleness, general weakness, and profuse perspiration (after two doses of three grains) in another; however, the symptoms disappeared, and did not return during the subsequent administration of cotoin. From these results, Dr. Blumenberg deduces the conclusion that cotoin is not a specific remedy for intestinal affections, but stands on a level with so-called indifferent remedies (such as decoction of salep, &c.). The statement presents a contrast to the outcome of observations by Gietl, Albertoni, Parsons, Burney Yeo, Fronmüller, Rohrer, Burkhardt, and Pribram.

3599. *Rostoshinsky on the Action of Hydrochinon.*—From some observations of his own, Dr. R. P. Rostoshinsky, of Tambov (*Proceedings of the Tambov Med. Soc.*, 1884, No. 6; and *Meditz. Obozr.*, 1884, No. 19), draws the following conclusions in regard to the antipyretic action of hydrochinon. 1. Hydrochinon invariably produces a rapid decrease in the febrile temperature. A ten-grain dose causes a fall of 1°·5 C.; a 16-grain dose, 3°·5 C. 2. However, the antipyretic action of the drug is of short duration. The temperature rises again in three or four hours, the rise being accompanied by a more or less intense rigor. 3. Hydrochinon reduces the frequency of respiration and pulse, and, when used in large doses, produces profuse perspiration, which is followed by a quiet sleep. 4. In the healthy subject, the drug has no action whatever on the temperature.

3600. *Krasnikoff on Lady's Thistle in Hæmoptysis.*—Dr. P. M. Krasnikoff, of Tambov, details (*Proceedings of the Tambov Medical Society*, 1884, No. 7; and *Meditz. Obozr.*, 1884, No. 19) six cases of hæmoptysis in which he obtained best results from the use of tincture of seeds of lady's thistle (tinctura seminum cardui Mariæ) in doses of thirty to forty drops, every three hours. In three of the cases, digitalis and ergot had been previously administered and failed. [Lesenevitch's article on the same subject may be found in the LONDON MEDICAL RECORD, July 1882, p. 269.] V. IDELSON, M.D.

PATHOLOGY.

RECENT PAPERS.

3601. LEMCKE.—The Relations of Chronic Interstitial Nephritis to Obliterative Arteritis of the Smaller Vessels. (*Deutsche Archiv für Klin. Med.*, Band xxxv.)

3602. RIEGEL, F.—The Changes in the Heart and Vascular System in Acute Nephritis. (*Zeitschr. für Klin. Med.*, Band vii.)

3603. AUFRECHT.—On Nephritis from Cantharides. (*Pathol. Mittheil.*, Band ii. Magdeburg: 1883.)

3604. BROSIN.—On Congenital Sarcoma of the Kidney. (Virchow's *Archiv*, Band xlvi., p. 453.)

3605. SINGER.—On a Case of Renal Abscess. (*Prager Med. Wochensch.*, 1883, No. 47.)

3606. FÉRÉ AND QUERMONNE.—On the Weight of the Heart in Cases of Kidney-Disease secondary to Cancer of the Uterus. (*Le Progrès Méd.*, No. 31, 1884.)

3607. DUNIN.—The Morbid Histology of the Different Kinds of Bright's Disease. (Virchow's *Archiv*, Band xciii.)

3608. KLEBS.—The Pathology of Diphtheria. (*Allgem. Med. Centralbl. Zeitung*, Oct. 13.)

3609. HOMÉN.—Secondary Degeneration of the Medulla Oblongata and Spinal Cord. (*Finska Läkaresällsk. Handl.*, Band xxiv.; and *Nord. Medicin. Arkiv*, Band xvi., Häft 1.)

3610. CACCIOLA.—A Case of Addison's Disease. (*Gazz. Med. Ital. Prov. Venete*, No. 5, 1884; *Giornale Internaz. delle Sci. Med.*, Fasc. viii., 1884.)

3611. PETRONE.—New Researches on Chlorosis. (*Gazz. degli Ospitali*, Nos. 34, 35, 36, 1884.)

3612. KLEIN, K.—On the Biological Properties of Typical Granulation-tissue. (*Meditz. Obozrenie*, 1884, No. 11, pp. 1125-6.)

3613. VOZNESENSKY, M.—On the Morbid Anatomy of Croupous Pneumonia. A Histological Investigation. (*St. Petersburg Inaugural Dissertation*, 1883, p. 51.)

3614. KRIVOSHEÏN, S.—On Changes in the Liver and Spleen in Relapsing Fever. A Histological Investigation. (*St. Petersburg Inaugural Dissertation*, 1883, p. 31.)

3615. RODIONOFF, GAVRIL.—On the Morbid Anatomy of the Pancreas in Chronic Constitutional Diseases. (*St. Petersburg Inaug. Dissert.*, 1883, p. 80.)

3616. KOSMIN, CONSTANTIN.—A Contribution to the Question of Development of Gummata in the Liver. *Voenno-Med. Journal*, Oct. 1883, pp. 158-188; and Nov., pp. 189-230.)

3617. KUSKOFF, N.—A Contribution to the Study of the Changes of Arteries in Chronic Nephritis. (*St. Petersburg Inaugural Dissertation*, p. 52, with 3 Figs.)

3618. GIBIER.—Experimental Researches on Rabies. (*Union Méd.*, 1884, No. 122.)

3619. HARE.—Traumatic Tetanus. (*Brit. Med. Jour.*, October, p. 652.)

3620. JONES.—On the Alleged Emigration of White Blood-corpuscles from the interior of Small Vessels. (*Lancet*, Oct. 1884, p. 630.)

ART. 3601. *Lemcke on the Relations of Chronic Interstitial Nephritis to Endarteritis Obliterans of the Smaller Vessels.*—Lemcke (*Deutsche Archiv für Klin. Med.*, Band xxxv.) relates the case of a woman with no history of gout, syphilis, or rheumatism, who presented definite signs of chronic interstitial nephritis. In the course of the two following years her mind became affected. She had incontinence of urine and fæces, and there was paresis of the limbs and right side facial paralysis. Later on, the four limbs became contracted. She died ultimately of coma. The brain throughout was studded with small foci of softening, and the microscope showed generalised arterio-sclerosis. There was atheroma of the aorta, and both iliac arteries were dilated. The heart was hypertrophied, and the kidneys presented an advanced degree of atrophy. The author accepts the view of Gull and Sutton, and regards the lesions as the consequence of a generalised arterio-sclerosis, depending upon atheroma of the great vessels and cardiac hypertrophy.

3602. *Riegel on the Changes in the Heart and Vascular System in Acute Nephritis.*—F. Riegel (*Zeitschr. für Klin. Med.*, Band vii.) recalls that he has previously drawn attention to the high arterial tension existing at the beginning of acute nephritis; that Galabin on clinical grounds affirmed the existence of cardiac hypertrophy in this disease; and that Friedländer had demonstrated this fact by *post mortem* examination in scarlatinal nephritis, the hypertrophy affecting both ventricles, but especially the left. Riegel has investigated this point in the same disease, and found that the intravascular pressure rises from the appearance of albumen in the urine, the heart's action being retarded and sometimes irregular. As the nephritis passes off, the arterial tension diminishes, and the heart's action is accelerated. An enlargement of the heart due to simple dilatation is only met with when the intravascular pressure is considerably elevated; it is always secondary to the occurrence of increased intravascular pressure. These facts were ascertained to exist in other forms of nephritis. He regards the prognosis as dependent more upon the state of the arterial tension than upon the degree of albuminuria present.

3603. *Aufrecht on Nephritis from Cantharides.*—Aufrecht (*Pathol. Mittheil.*, Band ii.) describes the following changes in the kidneys of rabbits poisoned by subcutaneous injections of cantharidine. In the first stage, there is swelling of the epithelium and its nuclei with the appearance of hyalin-globules in its protoplasm. This takes place principally in the epithelium of Bowman's capsules, then in the epithelium of the glomerulus, and lastly in that of the tubules. Cylinders are formed from the hyalin substance which originates from the epithelium. The next change is swelling of nuclei of the vessels of the glomeruli, resulting in obstruction to the circulation and obliteration of the glomeruli with subsequent wasting, so as to eventuate in atrophic granular kidney.

3604. *Brosin on Congenital Sarcoma of the Kidney.*—To the examples of sarcoma of the kidney in children published by Eberth, Cohnheim, Marchand, Landsberger and Cohnheim, Kocher and Langhans, Huber and Bostroem, Brosin has added another (Virchow's *Archiv*, Band xlvi.). The child was aged 3 years, and had wasted for two years. Its belly was swollen, and contained a hard tumour. The child died in convulsions. At the necropsy a tumour was found adhering to the left kidney, and measuring 5½ inches in length, 3¼ in breadth, and 3⅓ in thickness, and weighing 19 ounces. Microscopical examination showed it to be a sarcoma formed of connective-tissue mesh-work, in which the fibrous elements were mixed with striped muscular fibres.

3605. *Singer on a Case of Renal Abscess.*—Dr. Singer (*Prager Med. Wochensch.*, 1883, No. 47) relates the following case. A young man had had a fall on the left side at the age of 7 years, which was followed by hæmaturia lasting twelve days; since then, he had been always subject to pain in the left loin. At the age of 25 he had a mild attack of typhoid fever, for which he was in bed three weeks. During his convalescence he was suddenly taken with fever, pains in the left hypochondrium, and scanty urine. Three days later the fever fell; the urine was more abundant, and contained blood and pus. There was a fluctuating tumour in the left hypochondrium which appeared to adhere to the left kidney. This tumour slowly subsided and the pyuria diminished. He made a complete recovery. Singer thinks this was a case of abscess of the kidney or of the circumrenal cellular tissue, which opened into the pelvis of the kidney. He could not express an opinion as to its connection with the previous fall.

3606. *Féré and Quermonne on the Weight of the Heart in Cases of Kidney-Disease secondary to Cancer of the Uterus.*—MM. Féré and Quermonne (*Le Progrès Méd.*, No. 31, 1884) say that Artaud has insisted on the frequency of hypertrophy of the heart in cancer of the uterus, with secondary sclerosis of the kidneys. They have collected thirty-six such cases from the pathological records of the Salpêtrière, in which the average weight of the heart was only 229 grammes (7·63 oz.), only fifteen weighing more than 230 grammes (7·66 oz.), while eighteen weighed less than 220 grammes (7·3 oz.) As the weight of the heart in the female is from 220 to 230 grammes, we must admit that hypertrophy of the heart is not the rule in the renal lesions consecutive to cancer of the uterus, and that for the most part the heart is thin and small, as generally seen in cancerous patients.

3607. *Dunin on the Morbid Histology of the Different Forms of Bright's Disease.*—Dunin (Virchow's *Archiv*, Band xciii., p. 286) agrees with Weigert that all forms of Bright's disease are inflammatory, and all involve in varying degrees all the elements of the kidney, the various types not being represented by any corresponding histological distinction.

3608. *Klebs on the Pathology of Diphtheria.*—Klebs (*Allgem. Med. Centralbl. Zeitung*, Oct. 13, 1883) thinks that there are two forms of diphtheria, which may be distinguished by their course and by the microbes which occur in them. The first form is restricted to Eastern Europe; the throat-exudation is slight, but the constitutional symptoms are severe and rapidly fatal. The microbes found consist of brown-coloured micrococci and rod-shaped bodies. Hæmorrhages occur in the brain and spinal cord, in which the same rod-shaped bodies may be found in the sheaths of the vessels. The second form occurs in Western Europe. The local appearances are better marked, presenting the characters of what used to be called tracheal croup, or diphtheria as we see it. In this an exceedingly small bacillus is seen, which develops in groups in the epithelium of the mucous membrane. ROBERT SAUNDBY, M.D.

3609. *Homén on Secondary Degeneration of the Medulla Oblongata and Spinal Cord.*—In an article in the Transactions of the Society of Finnish Physicians (*Nord. Medicin. Arkiv*, Band xvi.), Dr. Homén describes the results of the examination of eight cases of secondary degeneration. The material was supplied from the Berlin town hospital by Dr. C. Friedländer, who placed it at the disposal of the author. In two of the cases a focus of softening was found in the pons Varolii; in one of them, in which the primary lesion had appeared three years before death, the author observed, what had not been hitherto noticed, a secondary degeneration extending from the focus in the pons to the lower part of the medulla oblongata. There was also in this case a wasting of the anterior cornua of grey substance, and a degeneration, although quite slight, of the motor roots on the diseased side, without any appreciable difference in the ganglion-cells of the two anterior cornua. In one case, there was found myelitic destruction of the centre of the dorsal portion of the spinal cord, with ascending and descending degeneration. In the remaining cases, the primary lesion was situated in the great cerebral ganglia, including the internal capsules. In the investigation of the diseased process, the author points out the necessity of a comparative study of cases of various duration; in the cases examined by him, the age of the primary lesion varied from twenty-three days to three years. In the case of twenty-three days' duration, there were special changes in the nerve-elements, and here they were chiefly confined to the axis-cylinder, which in many transverse sections of uncoloured preparations was not clearly distinguishable from the surrounding medullary substance, and frequently even presented a granular aspect: in some places the entire section of a nerve appeared granular. In no transverse section of a nerve was the change found to be limited to the medullary sheath. In stained preparations, a number of transverse sections showed the axis-cylinders with little or no colour, while in the adjacent healthy parts all the axis-cylinders were well stained. Besides this change in the nervous elements, there was found a slight alteration in the interstitial tissue, apparent only in stained preparations, where this tissue was more sharply coloured than in the surrounding healthy parts, and also contained a moderate increase of nuclei. In cases of a few more months' standing the changes in the interstitial tissue were more marked. In the two oldest cases, of two and three years' duration, the sclerotic process predominated; the few nervous elements which remained being for the most part well preserved. A. Henry, M.D.

3610. *Cacciola on Addison's Disease.*—Prof. Cacciola, of Padua, furnishes extremely interesting details of the *post mortem* and of the microscopical conditions in a case of Addison's disease. The patient, a man-servant, 35 years of age, died a year and a half after the skin had begun to bronze. The discoloration with muscular weakness had steadily increased. Febrile attacks occurred from time to time; and the patient died in one, delirious and convulsed. After death, beyond a certain softness of the brain, the nervous system, including the brain, spinal cord, and sympathetic nerve, was found absolutely normal. The semilunar ganglia and solar plexus especially were carefully examined. The suprarenal capsules, on the contrary, were greatly altered. They were enveloped in a mass of fat and fibrous tissue, closely adherent to them. Each capsule was about the size and shape of a hen's egg, and weighed about 35 grammes. On section, the organs were seen to consist of a thick fibrous capsule of lardaceous appearance and tendinous consistence, sending prolongations inwards. Between these prolongations were caseous substance and calcareous masses. The fibrous capsule and septa consisted of a thick connective tissue, with accumulations of leucocytes in course of degeneration. The contents of the spaces between the septa were made up of albuminoid detritus and oil-globules. In the central portion of the fibrous mass the connective tissue was calcified. Schizomycetes were looked for without success; but it is specially mentioned that some fat-globules looked like Koch's bacilli coloured by Weigert's method. There was little noteworthy amongst the other pathological conditions. There was, however, engorgement of the lymphatic follicles and of the agminated glands of the intestinal mucous membrane. The kidneys also were enlarged.

William R. Huggard, M.D.

3611. *Petrone on Chlorosis.*—From his researches on the blood of chlorotic patients, Petrone concludes that there is in these cases slight decrease of corpuscles, that the white corpuscles are normal, that there is not excess nor defect of albumen, that the red corpuscles have lost in specific gravity and the quantity of hæmoglobin, that in the hæmoglobin the quantity of iron is diminished, and that in the red corpuscles the percentage of alkaline bases, especially potash, is lessened. He explains the clinical picture of chlorosis by the defective number of red corpuscles, and by the anomalous constitution of the blood. The greenish tint of the skin is due to the special chemical modification which the pigment of the Malpighian body undergoes, as a consequence of the imperfection of the red corpuscles, and especially as a consequence of the diminution of potash. As to the pathogenesis, the author says he attributes no importance to the constitution, and to the anomalies of the vascular system described by Virchow. He concedes the importance only of morbid complications influencing conditionally the development, gravity, and pertinacity of certain cases of chloro-anæmia. Narrowness of the aorta and of its ramifications is not constantly found in the necropsy of chlorotics. He insists on the difference which exists between vascular hypoplasia and hypoplasia of the blood. These defects of formation may be associated or separate. In chlorosis, it is more frequent to have hypoplasia of the blood without vascular hypoplasia. This condition being congenital, the anomaly of the blood is susceptible of transitory improvement, but never of complete or durable cure. On the other hand, it is curable when it is only the transitory pathological product of passing and acquired disturbances of hæmatopoesis (psychical influences, menstrual disturbances, &c.). According to Petrone, the advantages obtained in chlorosis with Blaud's pills are to be referred rather to the carbonate of potash than to the sulphate of iron. The carbonate of potash supplies the organism with the deficient potash. Lime and soda should be given at the same time, as they also are deficient. He thinks cure may often result from pregnancy, and has seen many chlorotics improve while pregnant.

G. D'Arcy Adams, M.D.

3612. *Klein on the Biological Properties of Typical Granulation-tissue.*—In a short notice in the *Meditz. Obozrenie*, 1884, No. 11, p. 1125, Dr. K. Klein, of

Moscow, states that having experimentally studied the question of the behaviour of typical granulation-tissue in regard to schizomycetes, he came to the following conclusions. 1. Typical granulation-tissue presents an insurmountable obstacle to septic micro-organisms in their attempts to penetrate through this structure into the system. Schizomycetes are not able to penetrate beyond the peripheral layer of round cells of the granulation-tissue. 2. This property of granulation-tissue is dependent upon its peripheral layer consisting of masses of round cells, and further upon the living cell-elements of purulent liquid, which are identical with the round cells. 3. Round cells of the peripheral layer of granulation-tissue, and living cells of pus (all of which possess amœboid movement), envelop schizomycetes by their processes and absorb them. 4. A liquid containing schizomycetes, being injected under the skin, produces coagulation-necrosis of tissues; in the neighbourhood of the necrotic focus there is formed a round-celled infiltration, which more or less limits the spread of the micro-parasites.

3613. *Voznesensky on Morbid Changes in Croupous Pneumonia.*—Dr. M. Voznesensky, of Professor N. P. Ivanovsky's laboratory (*St. Petersburg Inaugural Dissertation*, 1883, p. 51), examined the lungs from twelve cases of croupous pneumonia (of which five were uncomplicated, four complicating the course of relapsing fever, and three complicating typhoid fever), and came to the following results. 1. In all cases of croupous pneumonia, the pulmonary capillaries and small vessels undergo morbid changes, which consist (*a*) in opaque swelling and granularity of the protoplasm of the epithelioid cells, with division of the nuclei of the latter, and (*b*) in swelling of the muscle-cells with division of their nuclei. 2. The changes are more marked in complicated cases than in uncomplicated. 3. In cases of pneumonia complicating typhoid and relapsing fever there are observed, beside the changes enumerated, hyaline degeneration of the pulmonary vessels, and extravasation around the diseased vessels. 4. In complicated cases, intra-alveolar morbid products always contain a number of red blood-corpuscles, which sometimes fill up the whole alveolar cavity. 5. The pulmonary lymphatic vessels present morbid changes both in complicated and uncomplicated cases of croupous pneumonia. The changes consist in swelling, opacity, and granularity of the protoplasm of the epithelioid cells, division of the nuclei of the latter, and presence of a number of red blood-corpuscles in the vascular lumen. 6. In cases of pneumonia complicating recurrent fever, the vascular lumina and alveoli contain large round cells enclosing colouring matter of the blood. These cells seem to be leucocytes which have absorbed red corpuscles. 7. The presence of micrococci is a constant phenomenon in croupous pneumonia. Micrococci were found by the author in the alveoli, in the lymphatic vessels, and in the lumina of small bronchi. They were met either isolated, paired and chained (in cases complicated by typhoid fever), or grouped in little heaps (in uncomplicated cases, and in cases complicated by relapsing fever). The author is not prepared to decide whether the micro-organisms have a pathogenic significance or not.

3614. *Krivoshein on Changes in the Liver and Spleen in Relapsing Fever.*—Having microscopically examined the liver and spleen from eight cases of relapsing fever, Dr. S. Krivoshein, of Professor N. P. Ivanovsky's laboratory (*St. Petersburg Inaugural Dissertation*, 1883. p. 31), found that in the liver there took place: 1. parenchymatous changes in the hepatic cells, with subsequent fatty or pigmentary degeneration; 2. swelling and proliferation of the nuclei of hepatic cells; 3. proliferation and opaque swelling of the epithelioid lining of the intralobular capillaries; 4, a small-celled infiltration of the interlobular connective tissue, with occasional initial stage of periangiocholitis; 5, catarrhal inflammation of minute biliary ducts. The changes in the spleen consist — 1. in hyperplasia of the lymphoid elements (both in the pulp and Malpighian bodies), of the epithelioid lining of the small veins and arteries, and sometimes of the muscle-nuclei of the small arteries; and 2. in subsequent regressive alterations (opacity, granularity, swelling, and disintegration of lymphoid elements and epithelioid cells). The author especially draws attention to the fact that morbid alterations of the epithelium of the hepatic intralobular capillaries and small splenic veins present a constant phenomenon in relapsing fever. Similar hepatic and splenic changes, as found by the author in relapsing fever, were observed by Dr. Lubimoff in 'biliary typhoid.' (*See* the *Dnevnik Kazanskykh Vratchey*, 1880, Nos. 14-25.)

3615. *Rodionoff on Changes in the Pancreas in Chronic Diseases.*—Dr. Gavril Rodionoff (*St. Petersburg Inaugural Dissertation*, 1883, p. 80) microscopically examined, at the laboratory of Professor N. P. Ivanovsky, the pancreas from five cases of chronic alcoholism with hepatic cirrhosis, three of pulmonary phthisis, two of chronic gastro-intestinal catarrh, one of progressive paralysis of the insane, one of syphilis, one of chronic uræmia, and one of senile marasm. The author summarises his results as follows. 1. Chronic interstitial (circumscribed or diffused) process in the pancreas presents a constant phenomenon in all chronic constitutional diseases. 2. The same may be asserted in regard to fatty degeneration of the acinar epithelium, the degree of which is proportionate to intensity and duration of general disease, and which proceeds parallel with the interstitial process. 3. The greatest changes are always observed in the head of the gland. 4. In cases of severe general exhaustion there is observed, besides fatty metamorphosis, pigmentary degeneration of the acinar epithelium. 5. In cases of advanced hepatic cirrhosis, a similar morbid process is observed also in the pancreas. 6. The main starting points for chronic interstitial process are—*a*, the connective tissue of the walls of the ducts; and *b*, the circumvascular connective tissue (in the interacinar spaces) infiltrated with leucocytes. 7. The majority of chronic general diseases is accompanied by amyloid degeneration of the pancreatic blood-vessels. 8. The pancreatic nerves seem to be also involved in morbid changes in chronic general diseases, since they present an increase in their connective tissue. 9. In some of the cases there is met, also, mucous degeneration of the acinar epithelium with formation of mucous cysts. [The author saw this in four of his fourteen cases. In all the cases, the cysts were situated near the large ducts, in the middle or caudal portion of the gland.] Dr. Rodionoff thinks that the morbid changes in the pancreas, as observed in chronic diseases, cannot remain without influence on the digestion, and must lead, in their turn, to a still further exhaustion of the patient. [A detailed description of the pancreatic changes in syphilis may be found in Professor N. P. Ivanovsky's inaugural work, 'A Contribution to the Question of Visceral Syphilis,' 1871, St. Petersburg. Dr. S. D. Kosturin, of Professor V. A. Manasseïn's clinic, published in the *Vratch*, 1880, No. 48, pp. 783-84, a short but valuable paper on morbid alterations of the gland in pulmonary phthisis (twelve cases). Dr. L. Mandelstamm, of Kazan, studied the state of the pancreas in acute infectious diseases (*Kazan. Inaug. Dissert.*, 1873). Dr. J. J. Stolnikoff contributed in 1880 a valuable work on the state of the gland in fever. *See* also Dr. Kiriloff's paper on changes of the pancreas in septicæmia, in the LONDON MEDICAL RECORD, Feb. 1884, p. 74.—*Rep.*]

3616. *Kosmin on the Development of Gummata in the Liver.*—Dr. Constantin Kosmin (*Voenno-Med. Jurnal*, Oct. and Nov., 1883) examined, at the laboratory of Professor N. P. Ivanovsky, the specimens from five cases, and arrived at the following results. 1. The formation of cells of a gummatous growth may proceed from three sources determined by the state of the vascular apparatus of the liver. (*a*) When the afflux of blood is but slight, the gummatous cells originate from corpuscles of the interlobular connective tissue. (*b*) When there exist moderate inflammatory changes in the capillaries and middle-sized vessels, the gummatous cells are formed from the epithelioid lining and connective tissue. (*c*) When the phenomena of irritation are strongly marked, the cells of new growth are originated from leucocytes, with subsequent proliferation of the latter. 2. Endarteritis in the cases under consideration seems to be a specific process, which develops itself under the influence of a poison circulating in the blood. 3. Periangiocholitis, which is often observed in cases of hepatic gummata, may serve as a starting point for the development of the latter. The granulation-elements of the tumour in similar cases are most likely derived from leucocytes, which emigrate from the dilated capillaries of the walls of biliary ducts. 4. Nuclei and cells in the situation of obliterated capillaries, conjointly with inflammatory changes in adjacent vessels of middle and small size, play an essential part in the formation of a gummatous growth. The author never saw an uncomplicated or simple fatty degeneration of a gumma; the centre of the tumour always contained not only a fatty mass, but also fibres, nuclei, and homogeneous, interstitial (basal) substance. Nor did he find any giant-cells (which were found in gummata by Unna).

3617. *Kuskoff on Changes of Arteries in Chronic Nephritis.*—Having carefully examined, under the guidance of Professor N. P. Ivanovsky, the vessels of the kidneys, liver, spleen, and heart from seven well-observed and uncomplicated cases of chronic parenchymatous and interstitial nephritis, Dr. N. Kuskoff (*St. Petersburg Inaugural Dissertation*, 1883, pp. 52) came to the following conclusions. 1. In cases of chronic parenchymatous and interstitial nephritis, there is observed a formation of cells in the intima of the arterioles, which rapidly leads to obliteration of the vascular lumen, with subsequent transformation of the cells into a structureless tissue. 2. In atrophic kidney with interstitial nephritis, the intima of the arterioles (especially of the splenic) is often subjected to colloid degeneration which, also, leads to obliteration of the vessel. 3. In larger arteries (in the intima of which there is also observed formation of cells with subsequent transformation into connective tissue), obliteration of the lumen in consequence of the thickening of the intima is found but rarely; their obliteration usually ensues as a result of cicatricial contraction of perivascular connective tissue. 4. The cells which are developed in the intima in endarteritis interstitialis have their origin from white blood-corpuscles of the blood-current. 5. True hypertrophy of the muscular coat of arteries in interstitial nephritis presents a fact beyond any doubt. It results from proliferation of the muscle-cells by way of division. 6. The extent of transformation of the hypertrophied muscular coat into a structureless tissue stands in direct proportion to atrophy of the renal parenchyma (in cases of interstitial nephritis). 7. Acute 'white stasis' in the vessels of the glomeruli seems to be a common anatomical cause of acute uræmia.

V. IDELSON, M.D.

3618. *Gibier on Rabies.*—These researches are thus condensed in the *Centralbl. für die Med. Wiss.*, No. 43. In all the pigeons and fowls inoculated by Gibier with the poison of rabies, the presence of the specific micrococcus (demonstrated by the author at the Académie des Sciences on June 11, 1883) was established. It was also ascertained anew that rabies in birds undergoes spontaneous cure. The latest experiments on the subject gave the following results. 1. Birds cannot be affected by rabies a second time. 2. Rabies can be transferred from one bird to another, with apparently an increased intensity, whereas in dogs the virus becomes weaker as a rule by transference. 3. The amount of poison inoculated seemed to have a decided influence on the degree of intensity of the rabies produced. The methods of injection employed by Gibier were, inoculation into the anterior chamber of the eye, and the introduction of a Pravaz's cannula within the skull by simple penetration, in preference to his previous method of trephining.

E. J. EDWARDES, M.D.

3619. *Hare on Traumatic Tetanus being due to Micro-organisms.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 652, some notes by Mr. A. W. Hare are published. The author believes in the theory that there is an irritant in the blood in cases of tetanus. The views of Billroth, Richardson, Bauer, and Poland agree with this theory. A comparison is made between the case of a mouse in which anthrax has been artificially produced, and a case of tetanus. In the mouse, symptoms of a tetanic character are developed as the disease approaches its fatal issue; the spasm which proves fatal passes on, without any intervening relaxation, into *rigor mortis*. Anthrax is a disease which is acknowledged to be due to a micro-organism; and this favours the view that tetanus is also due to a micro-organism circulating in the blood. A case is recorded where, six days after an operation for hernia, the wound became septic; within thirty-six hours tetanus, in one of its severest forms, set in, and death took place within forty-eight hours of the first onset of symptoms. Thirty minutes after death, blood was obtained from the neck, and was found to be full of micro-organisms. The discharge from the wounds was also loaded with micro-organisms, which existed also in vast numbers in sections of tissue taken from the abdominal wall twenty hours after death. In the *Lancet*, July 1884, Dr. Macdougall wrote an interesting paper, in which he considered tetanus to be a purely nervous disease, and advised the resection of the nerve in such cases.

3620. *Jones on the Alleged Emigration of White Blood-corpuscles from the interior of Small Vessels.*—In the *Lancet*, October 1884, p. 630, Mr. Wharton Jones addresses a remonstrance to professors of physiology and pathology, against teaching that the white corpuscles of the blood escape from the interior of small vessels. The paper concludes with the following statements. 1. As yet no accurate and consistent observation has been adduced to prove decidedly that white corpuscles of the blood emigrate from the interior of small vessels by boring through their entire walls under any circumstances, physiological or pathological. 2. When white corpuscles are found unenclosed in a vascular wall, it is because the wall has disappeared, from having become disintegrated and dissolved, as was shown by the author thirty-five years ago.

Richard Neale, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

3621. Collier.—A Case of Acute Intussusception in an Infant Eighteen Weeks Old. (*Lancet*, August, p. 366.)

3622. Smith, Noble.—A New Plan of Operating upon Meningocele. (*Lancet*, September, p. 490.)

3623. Lee.—On Whooping-cough. (*Med. Press and Circular*, September, p. 263.)

3624. Dukes.—A Remarkable Case of a Juvenile Earth-Eater. (*Lancet*, Nov., p. 882.)

3625. Owen.—Lancing the Gums. (*Brit. Med. Jour.*, Nov., p. 901.)

3626. Green.—Acute Vomiting in Infancy treated by Nutrient Enemata. (*Med. Times and Gazette*, September, p. 431.)

3627. Di Lorenzo, Professor G.—On the Erythema of Early Infancy and its Treatment. (*Archiv. di Patologia Infantile*, Jan. 1884.)

3628. Rachel.—Treatment of Fracture of the Thigh in Children. (*Med.-Chir. Corresp. Blatt. für Deutsche Amer. Aerzte*, April.)

3629. Finlayson.—A Case of Congenital Unilateral Hypertrophy, with Patches of Cutaneous Congestion. (*Glasgow Med. Jour.*, November.)

3630. Blackader.—A Case of Congenital Hypertrophy of the Left Foot. (*Archives of Pediatrics*, Vol. i., No. 10.)

Art. 3621. *Collier on a Case of Acute Intussusception in an Infant Eighteen Weeks Old.*—Dr. Collier, in the *Lancet*, August 1884, p. 366, reports the case of a child, eighteen weeks old, who had suffered for a week with vomiting and constipation. When the author saw the child, there was an elongated swelling in the right inguinal and hypogastric regions. Blood and mucus passed by the rectum, and the child was much collapsed. After some hours had elapsed, chloroform was administered, and warm water was slowly injected into the rectum by means of a Higginson's enema syringe. When about thirty-five to forty ounces of water had been injected, the tumour entirely disappeared. The patient was then wrapped in blankets, but abdominal fomentations were applied, and a belladonna mixture was given every two hours. About three hours afterwards a slight fæcal motion was passed; the child slept well, and made a rapid recovery.

3622. *Smith on a New Plan of Operating upon Meningocele.*—Mr. Noble Smith, in the *Lancet*, September 1884, p. 490, describes a plan by which the risk of injecting fluid beyond the sac of a meningocele is reduced to a minimum. A child, aged 14 days, was sent to Mr. Smith, with a meningocele at the back of the head. Pressure was applied for two months without success. Then the following operation was performed. The sac was emptied by pressure, and its two sides held together between the finger and thumb. A hypodermic syringe was thrust through the sac as it was thus held, the point being directed just to one side of the median line, care being taken that the point did not enter the cavity of the sac, but into its wall close to the lining membrane. Only eight minims of iodo-glycerine were injected. The child cried for about two hours afterwards, then fell asleep, and woke up seeming quite comfortable. After six weeks the tumour was again injected, and in a few days it felt firm, as if it were consolidating, and more iodine was injected; this operation was repeated on three or four subsequent occasions, a complete cure resulting in about six months from the first injection. Mr. Smith concludes by saying that, if the injection be made into the walls of the sac, the iodine is not only prevented from entering into the cavity of the skull, but the part which requires to be acted upon, the sac, is influenced directly.

3623. *Lee on Whooping-cough.*—The *Medical Press and Circular*, September 1884, p. 263, contains a lecture by Dr. Robert Lee on whooping-cough. The author commences by giving illustrations showing the very infectious character of the disease. In very young children, the disease is not always recognised, as the whoop is a rare symptom; the reason being that a young child cannot vocalise a whoop. It has neither the power nor the organs to do so. The cough of whooping-cough is due to laryngeal irritation. One may hear the same kind of cough in children with large cervical glands, and possibly this fact may have led some to infer that in whooping-cough the glands are affected. The early symptoms of the disease are most important, as the wasting and debility caused by the primary fever is in many cases well marked; another symptom which is often fatal is diarrhœa—it usually occurs in hot weather, and is often diagnosed as infantile diarrhœa, for the laryngeal and pulmonary symptoms usually subside when the diarrhœa arises. With regard to treatment, the best plan is to treat the general and local symptoms separately. Among the local remedies for the relief of the laryngeal spasm, there is none which gives more decided relief than the inhalation of carbolic acid. Alum with honey is a popular remedy, and this acts apparently locally. Four or five grains of bromide of potassium, with 4 or 5 minims of tincture of belladonna, seem to diminish the laryngeal irritability for a time, but in severe cases no great benefit is derived from them. As regards general treatment, the symptoms of fever and wasting have to be considered. The author concludes by stating the general routine treatment adopted by him; a mixture of bromide of potassium and extract of belladonna, with an equal quantity of mistura oxymellis scillæ of the Pharmacopœia of the Children's Hospital. The thorax and back are to be rubbed every night with turpentine liniment; and when possible the fumes of Stockholm tar, obtained by gently heating the tar, or stirring it with a hot poker, should be inhaled.

3624. *Dukes on a Juvenile Earth-Eater.*—Dr. Dukes records in the *Lancet*, November 1884, p. 822, a remarkable case of a girl, aged 5 years, who was brought to him on account of passing a great number of round worms. The child's mother stated that two years previously she was ailing for a few days, and vomited a large round worm. A dose of castor-oil was given and three more worms were passed by the bowels. The mother noticed about this time that the child would eat mud or earth whenever she had the opportunity, and though punished severely, and kept in the house for days, she would run out when no one was near, and immediately commence eating mud or dirt. When reprimanded, she said it was to ease a pain in her stomach. For two years this continued, and during that time there must have been at least one hundred worms evacuated. Dr. Dukes took her into hospital, and treated her with santonin; several worms passed at first, but eventually none were noticed; the child grew fat, and lost her mud-eating habits.

3625. *Owen on Lancing the Gums.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 901, is published a paper read before the Medical Society of London, by Mr. Edmund Owen, on the subject of gum-lancing. The author seeks for information, and asks whether this ancient practice is beneficial or the reverse. It seems to the author a strange practice to lance the mucous membrane (which is covering a tooth and which is not at all inflamed), with a view of thus aiding the cutting of the tooth, and remarks that the molar teeth of children do not demand help from the lancet, but that the sharp-edged teeth, the incisors, are the ones to whose aid the lancet is generally applied. Mr. Owen thinks that the feeding of the child is most often at fault, causing it to be irritable, and to have inflamed gums, which are sometimes relieved by a little local bleeding; but to put down everything that ails a child during the first two years of its life to teething is a great mistake. He then points out how often infantile paralysis is overlooked; the practitioner sees the child feverish and irritable, and ascribes it all to the teeth; then, some weeks afterwards, the limbs are found wasted or deformed, and the true nature of the illness is revealed. Mr. Owen invites general practitioners and dentists to contribute their experiences with reference to the subject, and to settle the question, whether the use of the gum-lancet should be more universal, or whether it should be discarded as an useless torture.

3626. *Green on Acute Vomiting in Infancy treated by Nutrient Enemata.*—Mr. Green, in the *Med. Times and Gazette*, Sept. 1884, p. 431, records the case of a child 7 months old, who was seized with vomiting and diarrhœa after taking a bottle of sour milk. Nothing controlled the vomiting until Mr. Green tried nutrient enemata; and for four days about two tablespoonfuls of milk or beef-tea with half a teaspoonful of brandy were given every two hours by the rectum. The child soon revived, and by degrees was able to take nourishment by the mouth.

Richard Neale, M.D.

3627. *Di Lorenzo on the Erythema of Early Infancy and its Treatment.*—Professor Di Lorenzo describes the great frequency of erythema in early life, its form, symptoms, and generally benign course; its seat, which in babies is ano-genital and crural; its causes, which are generally local irritation from excrementitious matters, chafing of clothes, and heat of the part; its nearly always favourable prognosis. Anular and papulous erythema, especially if diffuse, may be confounded with similar syphilodermes; less difficult is the differential diagnosis of erythema gyratum from psoriasis, eczema, &c. As to treatment, in simple forms, well regulated hygiene is sufficient. Cleanliness, powders of starch, talc, lycopodium, simple bran or starch baths, with alkalies internally and good food are required. In intertrigo the same treatment is good, repeating the baths oftener, with elder-flower water, goulard, bicarbonate of soda and chlorate of potash. Excessive sensibility may be treated with bromide of sodium. In more obstinate forms he recommends carron-oil, glycerole of starch, oleate of zinc, and benzoated zinc ointment, alone or with bismuth. Lastly, he draws attention to the unfavourable influence of thrush in infantile erythema.

G. D'Arcy Adams, M.D.

3628. *Rachel on the Treatment of Fracture of the Thigh in Children.*—The *Med.-Chir. Corresp. Blatt. für Deutsche Amer. Aerzte* for April contains an article by Dr. Geo. W. Rachel, of New York, the substance of a lecture delivered to the Medico-Chirurgical Society of German Physicians in New York on Jan. 3, 1883. The article is on the treatment of fractures of the thigh in children, the author disapproving of the fixed position of extension, and recommending instead flexion and rotation outwards. Three cases are given: in the first of which the position was adopted by the child itself, with such good results that it was purposely employed in the following cases. Dr. Rachel remarks that while the habit of the upright posture and the greater development of the extensor muscles render extension the most favourable position for the uniting of a fracture in the adult, the flexed and externally rotated position is undoubtedly the most favourable both *in utero* and during the first years of life.

Alice Ker, M.D.

3629. *Finlayson on Congenital Unilateral Hypertrophy with Patches of Cutaneous Congestion.*—The case in question, as described in the *Glasgow Med. Jour.* for November 1884, was that of Isabella McH., the ninth child of healthy unrelated parents, whose history showed no record of deformity (with the exception of one other child, who died soon after birth, and was said to have some malformation of the lower limbs). She was born at full time after a natural labour, and was immediately noticed to be larger on the right than on the left side; and when she cried, or became excited, the difference was more marked still. The teething of the child was very peculiar, for she had eight teeth on the right side before any appeared on the left. When nine months old, she had double otorrhœa. The child when seen by Dr. Finlayson was 18 months of age, and only barely able to stand. In the opinion of the mother, the relative difference in the size of the two sides was about the same as at birth. The hypertrophy involved the bones, but not the skin. Minute measurement, given in detail in the paper, showed a difference in favour of the right side of about one-thirteenth: but the increase was not uniform, nor even completely unilateral, for two fingers of the left hand were markedly hypertrophied. The right tonsil was the larger, but the eyes and the arteries and veins showed no difference on the two sides, and the two sets of finger-nails grew at the same rate. Hawksley's surface-thermometer gave a reading for the right cheek 2·4 higher than for the left, but other parts of the body exhibited but slight difference. The discoloration of the skin was very slightly marked when the child lay perfectly quiescent, but increased with exertion, becoming red, purple, or even blue. There was no elevation of the skin. The parts affected were the abdomen, the inner side and back of the right leg, and, to a less extent, the left arm and leg and a portion of the back. There were no distinct nævi. Six months later the child was again seen. She could then walk, but her condition otherwise was not materially altered. The right calf then measured 22 centimètres, the left 18⅓ centimètres. A bibliography of the subject concludes the paper.

3630. *Blackader on a Case of Congenital Hypertrophy of the Left Foot.*—Dr. Blackader, of Montreal, describes, in the *Archives of Pediatrics*, Vol. i., No. 10, one of these rare cases. He attended the mother in her confinement in March 1883, and the course of the labour was quite normal. The deformity of the child [sex not stated—*Rep.*] was noticed at the time, and consisted in a great enlargement in all its diameters of the anterior half of the left foot; the second and third toes were webbed, and much larger than the great toe; while the fourth and fifth toes were also enlarged, but to less extent. The plantar surface showed a large, firm, somewhat elastic tumour of smooth rounded surface, extending from the roots of the toes to the middle of the foot. The skin appeared normal, and there was no tenderness or altered temperature. All other parts of the body were symmetrical, and there were no marks on the skin elsewhere. Six months later a Martin's bandage was applied, and at the end of two months a slight improvement was effected. At the age of 14 months the whole of the second and third toes, with the anterior two-thirds of their metatarsal bones, were removed, together with the corresponding part of the tumour. The pathological report was that the tumour was fatty, with fibrous bands; the phalanges were enlarged, especially at the articular extremities; the cartilages were thickened; the ends of the tendons were hypertrophied. The measurements taken before the operation were, for the two feet—length, 4⅜ and 6¼ inches; circumference at ball of foot, 5 and 7⅛ inches. The mother attributed the deformity to a narrow escape from a severe crush of her left foot in the tenth week of gestation.

RALPH W. LEFTWICH, M.D.

REVIEWS.

ARTICLE 3631.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. Lond., Member of the Royal College of Physicians, London; Physician to the Queen's Hospital, Birmingham; Emeritus Professor of Physiology, Queen's College, Birmingham; Examiner in Medicine for the University of Aberdeen, &c. Third Edition. London: H. K. Lewis. 1884.

IN no species of literature, probably, is greater tact and judgment required than in the production of elementary manuals of medicine and surgery. The field to be covered, on the one hand, is so vast, and so rich in details both interesting and important, while the condensation essential in a student's handbook, on the other, is so circumscribing, that the Scylla of prolixity is often only avoided by falling into the Charybdis of insufficiency. In the manual before us, Dr. Carter has struck the happy mean with a success as complete as it is unusual. Sketchy in character rather than elaborate, the book presents us with a series of word-pictures that are full of suggestiveness to the thoughtful student. Its tone is at the same time concise and graphic, while free from dogmatism upon all uncertain points; and its tendency will undoubtedly be to lead the reader to an appreciative study of the philosophy of medicine, rather than to cram him with a mass of undigested detail, a great part of which in the immediate future he would probably have to unlearn.

The work commences with a brief but clear and concise statement of the main points in general pathology, and this section is followed by the consideration of diseases, first general, then local, in the accustomed order. Interspersed throughout the descriptive matter are many items of clinical instruction, so lucidly expressed as to be of the utmost value to the student. The section on intestinal worms is particularly good, and contains an easily comprehensible statement of so much of their life-history as is essential to a knowledge of the diseases in which they play an important part. The chapters on cardiac diseases are also worthy of commendation, while that on diseases of the nervous system is admirable, especially the preliminary remarks on nervous symptomatology, and the brief abstract of electrical nervous phenomena. All that is definite and settled in the recently explored pathology of the various forms of sclerosis, in progressive muscular atrophy and infantile paralysis (chronic and acute anterior poliomyelitis), &c., is here presented in a most lucid and concise description that can scarcely fail to be understood.

Dr. Carter subjoins a very useful formulary of selected remedies; and great judgment is shown in the choice of those included, many of the newer preparations, whose value is no longer a matter of dispute, finding a place therein. We notice, however, with astonishment the absence, both in the body of the work and in the formulary, of any reference to euonymin, a drug which, perhaps, more than any of recent introduction has made good its claim as a remedy in various hepatic disorders.

The weakest section, in our opinion, is that on diseases of the throat. No distinction is made between laryngitis and laryngeal catarrh; while, in the consideration of tonsillitis, Dr. Carter seems to us somewhat vague and misleading. He divides tonsillitis into two forms, the catarrhal and the parenchymatous, and refers in the latter division to the blocking of the mucous crypts ('follicular tonsillitis'), which condition rather belongs to the first or catarrhal form. Moreover, the tissue of the tonsil, instead of being 'very apt to undergo suppuration,' rarely—some say never—does so. It is in peritonsillitis, or inflammation of the submucous tissues around the tonsil—which is of course often concomitant with, though more frequently independent of, inflammation of the gland-tissue itself, that suppuration is apt to occur. Nor are these details unimportant; for they exercise a great influence upon the treatment to be adopted, more particularly in reference to the use of astringent gargles, which are worse than useless in any but the catarrhal or follicular form. It is to be noted, however, that Dr. Carter makes no reference at all to gargles amongst therapeutic measures. It is also hard to endorse Dr. Carter's statement that the prognosis is always very favourable in hysterical aphonia. It not unfrequently happens that neither faradisation, nor any other therapeutic measure, will 'readily cure' hysterical laryngeal paralysis; and in this, as in many other manifestations of hysteria, a too off-hand and confident prognosis may result in no little mortification. But, after all, these are only a few points to which exception can be taken ; and, speaking generally of the book, we can only say that its conciseness, lucidity, and breadth will doubtless secure for it the honourable place among students' handbooks which it richly deserves.

KENNETH MILLICAN.

ARTICLE 3632.

On the Etiology of Aneurism. By JAMES BARR, M.D. Reprinted from the *Liverpool Medico-Chirurgical Journal*, July 1881.

DR. BARR regards atheroma as the great cause of aneurism, and atheroma is the consequence of imperfect nutrition of the intima, the result of high arterial tension. The intima is nourished by imbibition from the vasa vasorum, which penetrate to the muscular coat, but this circulation can only go on during the relaxation of the artery, *i.e.* between the pulse beats ; but in high arterial tension there is no period of relaxation; hence the failure of nutrition. The immediate cause of aneurism is hard work or strain. Syphilis and alcohol have no direct influence. Embolisms only cause aneurisms when, by leading to inflammation, they weaken the coats of the vessel. ROBERT SAUNDBY, M.D.

ARTICLE 3633.

Remarks on the Pathology and Treatment of Tubal Nephritis. By JAMES BARR, M.D. Reprinted from the *Liverpool Medico-Chirurgical Journal*, July 1883.

DR. BARR follows Dr. Dickinson in his nomenclature ; he doubts the thermal origin of the disease, believing that direct cold may produce it, also acute disease, diphtheria, pyæmia, small-pox, pneumonia, and renal irritants, cantharides, and turpentine. He thinks that albuminuria depends upon the velocity and statical pressure of the blood-current within the Malpighian tuft. In inflammation of the kidney the vaso-motor nerves are paralysed, so that the velocity is diminished and the pressure increased. Dropsy also occurs under similar conditions. In acute Bright's disease, the retention of water in the blood leads to increased statical pressure in the capillaries, and transudation. In the treatment of this disease, he advocates venesection and local wet cupping in the early stages. Dry cupping and poultices are good at all stages. Antimony and warm baths as diaphoretics, acupuncture to relieve anasarca. Pilocarpine is to be used with caution.

The bowels should be unloaded, but hydragogue cathartics are too depressing. Saline diuretics, especially the bitartrate of potash, are useful. In obstinate cases more stimulating diuretics may be used. Benzoate of soda is beneficial when there are indications of uræmia. Obstinate vomiting should be checked by ice, bismuth, creasote, sinapisms, &c. Uræmic convulsions require purging, hot pack, and chloral. Opium and nitroglycerine should be avoided. Bromide and benzoate of ammonia are valuable. Later on, iron, chloride of ammonium, digitalis, and nux vomica are indicated. Nothing acts specifically on the discharge of albumen. The restoration of the function of the kidney must be estimated by the daily excretion of urea, not by the albuminuria. The diet in the early stages should be very light, milk with lime water, or peptonised. Beef-tea and oatmeal should be avoided, also tea, coffee, and alcohol. Later on, nutritious diet should not be withheld too long, and fresh air and exercise should be permitted. Whenever possible, the coming winter should be spent in a dry warm climate.

ROBERT SAUNDBY, M.D.

ARTICLE 3634.

Club-foot. Is Excision of the Tarsus necessary in Children? By DE FOREST WILLARD, M.D. Philadelphia : 1884.

DR. WILLARD refers only to those cases of talipes in which the contraction of tissues or the abnormal condition of the bones is so great that serious measures of relief are demanded. He urges that in young children the most severe deformities of the feet may be corrected by tenotomy, forced manual correction, and retention in plaster of Paris bandages. He refers to a surgeon who has performed osteotomy of the tarsal arch in an infant only sixteen months of age, 'in whom it is scarcely possible to believe that any bony deformity could have existed too great for correction by simpler means.' He urges that 'the cases that fail will be those in which the surgeon and patient have disregarded the fact that the most important part of cure follows the operation.'

For subsequent treatment, after forced reduction, a special shoe is recommended, in which the tendency to deformity—in the case of talipes varus—is counteracted by elastic traction directed through an 'eye' set at right angles to the sole of the boot. The use of mechanical power to effect forced straightening is not so safe as that effected by the hands alone, but when the latter are unable to alter the position of the foot the more powerful measures must be adopted; the risk, which is not great, should be taken.

The bad results of *redressment forcé* (Delore's method) for knock-knee do not apply to forced redressment in cases of club-foot. The force applied at the knee often expends itself upon the wrong tissues, and may seriously injure the joint, which is not the faulty region.

With regard to osteotomy for club-foot, the cases operated upon are often recorded as cured ; but this possibly refers more to the appearance than to the walking powers of the foot. A foot, when bare, may show a decided inversion of the anterior portion, and yet be so easily straightened by an apparatus, or even by an ordinary leather shoe, that the deformity is of no consequence if the powers of progression be good. On the other hand, a foot presenting to view a far straighter appearance, due to the rigidity following excision, may permit locomotion only with pain or difficulty.

After a summary of the various opinions upon the subject, tables are added giving the statistics of the different forms of osteotomy for club-foot. Tarsotomy is considered necessary only in some very severe cases, almost exclusively in adults.

E. NOBLE SMITH.

ARTICLE 3635.

Correspondence on Ovariotomy. MR. GEO. R. JESSE, SIR T. SPENCER WELLS, and others. Third Edition. London : Pickering.

MR. MILL remarked that a belief founded not on reason but on sentiment is difficult to eradicate, however false it may be. Having an abiding foundation independent of fact, its conflict with fact is either not perceived, or is forgotten as soon as the hostile circumstance is beyond the range of the preoccupied attention. The anti-vivisectionists afford an example. These well-meaning people, impressed with the painfulness of experiments on living animals, are convinced that science has not gained, and that mankind has not been benefited thereby. To attempt to convince these people of their error would be a profitless task. To show that the best part of our physiological knowledge comes from vivisection, and that this knowledge is in daily use in the practice of medicine, would have little weight. It would be objected against any instance that might be put forward either that the fact said to be discovered was known before, or that it was useless, or that it would have been discovered independently of vivisection. In all these objections there might be some truth. Facts are often discovered and rediscovered without being applied; and the knowledge might, moreover, have been acquired in the ordinary course of surgical experience.

'Saul killed his thousands and David his tens of thousands, and there is no reason, my dear fellow, why you and I shouldn't kill a few.' This, it is said, was the consolation given by an old surgeon to a young colleague despondent over the ill-success of his operations. The young man took fresh heart, and soon his efforts were attended with success. Sir Spencer Wells, in the early days of the operation that has made his name famous, acted on a different principle. He wished to settle a doubtful point in the operation. He might have waited and judged by experience in the ordinary way. But he thought that the more prudent, as well as the more honourable course, was to settle the point by experiments on rabbits rather than to jeopardise the lives of women by operating in blind ignorance. Whether the point was shown by events to be a material point or not, is beside the question. The real question is this—Does the man do right who sacrifices a rabbit, or a dozen rabbits, in the belief that he is thereby helping to save the life of a woman? The answer will, of course, depend on the comparative value at which rabbits and women are estimated. An Indian fakir who thinks it a crime to kill a flea, would probably decide in favour of the rabbit. Whether the fakir's view is shared by the Society for the Total Abolition and Utter Suppression of Vivisection, does not appear. It is at least certain that germs and bacilli are as yet excluded from the sphere of the society's benevolence; for Mr. Jesse speaks apparently with favour of the use of carbolic acid in surgery. In these days of specialisation, however, it may well be expected that an off-shoot society for the protection of germs, bacilli, and other lower forms of life will be developed. Such a society would come not one moment too soon; for, with the growth of sanitary science, the destruction of unbefriended germs has been great, and is still on the increase.

Mr. Jesse's arguments in the correspondence indicated above consist mostly of matter to prove irrelevant points.

William R. Huggard, M.D.

Cremation.—At a recent meeting of the Cremation Society of Sweden, it was announced that a piece of land in the neighbourhood of Stockholm had been granted by the city authorities for the formation of a crematorium.

Article 3636.

A Few Suggestions to Mothers on the Management of their Children. By A Mother. London: J. & A. Churchill. 1884.

This little work is a very praiseworthy effort by an evidently intelligent mother, to impart practical information not only to young mothers but to all who have the care of children.

The authoress in her preface states, 'There are schools of cookery, there are institutions where sick nursing is taught, &c., but a place where people might be instructed in the best way to bring up infants and children seems one of those undeveloped ideas which occur occasionally to philanthropic people, but of which the need is apparently not felt.'

The remarks are divided into ten chapters, dealing with such subjects as feeding, repose, fresh air and exercise, bathing, and other such matters.

The chief fault we have to find with the book is that the details are not sufficiently definite. The authoress herself seems to assume that those for whom she has written the book know how often a child should be fed, and of what strength the food should be given. It is here that mistakes are often made, and for this reason we call attention to the defect, so that the defect may be remedied.

Arthur W Edis, M.D.

DIETETIC NOVELTIES.

Article 3637.

SCOTCH WHISKY.

The great increase that has taken place of late years in the consumption of Scotch whisky has had the same effect that always follows whenever a constant and increasing demand sets in for any article. Old stocks have mostly been exhausted, and, as a consequence, new spirit has been placed on the market long before it has been fit to drink, or artificial means have been adopted to give it a kind of forced maturity. It is useful under such circumstances to find a firm who are not led away by the demand for their products to ignore the most essential feature in this or any other spirit—viz., reliable ages or sound maturity. Our attention has recently been called to the 'special blend' of Highland whisky of Messrs. James Robinson & Son, Cloth Market, Newcastle-on-Tyne. The firm have paid considerable attention to the distillation of spirit, and, by a series of careful blendings, have perfected an article that may be relied on and which may be safely recommended by the physician where stimulants of this class are needful. Whatever preference may be given to individual 'stills,' there is no doubt that blending in the hands of practical adepts is often beneficial; in fact, some of the finest whiskies are blended spirits, and the one in question bears out this experience. It has the true flavour of well-matured whisky, and is mellow and delicate to the palate. The report of Dr. Hassall, and Mr. Edwy Godwin Clayton, F.C.S., as to its constituents, states that they have submitted to a very careful examination and chemical analysis samples of the blended Highland whisky supplied by Messrs. Jas. Robinson & Son. The results obtained were as follows.

Water	56·74
Alcohol	42·71
(Equivalent to 88·09 per Cent. of Proof Spirit.)	
Acidity	0·02
Non-volatile Organic Matter	0·50
Mineral Matter	0·03
Total	100·00

Special search was made for traces of fusel-oil, but with negative results. The samples were also found to be free from lead, copper, and other mineral impurities. This whisky possesses considerable alcoholic strength; but it is mellow, and characterised by a very delicate and pleasant flavour.

NEW PREPARATIONS.

ARTICLE 3638.

BARNES' IMPERMEABLE CARRAGEEN POULTICE.

THIS is certainly a most ingenious idea. It is a preparation of the mucilaginous Irish moss, combined with glycerine and thymol, spread on a light impermeable material. When moistened with a few drops of water it forms an admirable poultice, which will retain its heat for an almost unlimited time. It offers exceptional facilities for the application of lotions, liniments, &c., and will undoubtedly prove serviceable to travellers and others. It is made by Mr. Barnes, of Trevor Terrace, Knightsbridge, S.W.

MISCELLANY.

PURITY OF AIR IN SCHOOLS.—The Aberdeen Philosophical Society has appointed a committee to investigate the purity of the air in the schools of the city, and also to consider the best means for ventilating the schools. The chemical investigations of Mr. Jamieson, city analyst, showed that the exit air contained a very large proportion of carbonic acid; while the outside contains 4 to 5 parts of carbonic acid per 10,000 of air; the amount of carbonic acid of the exit air varied from 12 to 25 per 10,000.

MUSHROOMS.—In the *Lancet*, October 1884, p. 747, an article is devoted to the subject of mushrooms. According to authorities, the noxious forms of fungi are distinguished from the wholesome varieties, by one or other of the following peculiarities: their rank odour, or high colour; their tough, or watery flesh, and scaly or spotted surface; their pungent, spicy, or bitter taste; their growing in clusters, and commonly in wet and shady places. The esculent types, on the contrary, are usually white or brownish, not scaly or spotted, dry, brittle, bland, grow singly, and preferring dry pastures. A pale, pinkish hue characterises the 'gills' of the common edible mushroom, while a dark colour marks those of the poisonous variety. Poisonous properties are wont to develop in wholesome kinds under certain conditions, rotting wood in the soil being harmful. The symptoms of poisoning are briefly those of an irritant of the digestive tract, sometimes complicated or even in great part replaced by delirium and coma. Treatment must aim at combining the removal of the poison by emesis or purgation, with a sedative action.

ANILINE DYES.—In the *Lancet*, Oct. 1884, p. 622, a letter is published from Mr. Gaus, a member of the firm of Leopold Cassella & Co., in which great surprise is shown concerning an article which appeared in the *Lancet*, Sept. 1884, p. 510, in which various diseases were attributed to 'aniline colours.' It is asserted that the workmen employed in the factories, where the dyes are manufactured, are never injured in any way. Experiments have been made by feeding animals with aniline colours, especially with the much calumniated magenta, and it has been proved that no harm whatever results therefrom. As to the means of fixation, no mordants are used for wool or silk, and for cotton-dyeing generally tannic acid or sulphate of alumina only are employed, neither of which injures the skin even in the free state. The editor notes that the aniline, to which the letter referred, contained arsenic, whilst that of Mr. Gaus is pure. Instances of the production of a rash on the skin by wearing garments dyed with aniline colours have been observed by numerous physicians and surgeons.

VALUE OF BRAN AS HUMAN FOOD.—Bran is rich in albuminoids and fat; it therefore becomes a question of expediency whether economically it is better to separate the bran in the manufacture of flour and use it as food for cattle, or to employ for human food flour prepared from the entire grain, or 'whole meal' as it is called. As the result of his researches, M. Rubner (*Bied. Cent.*, 1883) finds that the amount of whole-meal bread digested in the human body is less than that of bread made of medium or of the finest flour; yet that in the former case there is a quantity of nutritious matter utilised in the intestines, both from the whole meal and the bran contained in it. So far, therefore, no objection can be raised to its use, but the author observes that, if it is so used, it should be ground much finer than is usually done. From an economic point of view, however, the use of whole meal is not to be recommended, as thereby animals which can digest the bran much more completely than human beings would be deprived of it; less value would therefore be derived from it.

THE DANGERS OF TELEGRAPHY.—The following passage is taken from the *Edinburgh Daily Express*: Medical men say there is in telegraphing much that tends to brain-mischief, and one case may be quoted here, that of a large Scotch office, where three cases of lunacy occurred in as many years—a phenomenal state of affairs, of course. An American publication, devoted to telegraphic matters, mentions two recent cases of operators dying at their posts. 'Ned' Cummins, employed in an office in Virginia, was engaged in 'receiving' a press report, when he signalled to the operator at the other end, 'Been spitting blood; take it easy.' Directly afterwards the poor fellow dropped from his chair dead, but—if it be not brutal to say so—there was no great delay to the press report, for very shortly afterwards another hand was secured, who wired to the 'sending' clerk these words: 'Cummins just died; I'm his substitute; go ahead after "address,"' this being the last word written by Cummins when the grim ferryman beckoned him. The other case was of one Monk Monroe, who, finding himself in the middle of his work stricken by the 'blindness of death,' had just time to signal along the wire, 'Send a doctor; I am going up the hill,' and he was 'relieved' for ever. He was found with his hand upon the 'key'! A correspondent writes: In the Edinburgh office no fewer than three cases of insanity have occurred this year. It is believed among the operators that reading by sound for prolonged periods is the chief cause in producing this terrible disease. This is confirmed by what Dr. Savage writes in his recent book on *Insanity and Allied Neuroses*. 'Work of a monotonous character is injurious, and assists in producing mental disorder. But such work is comparatively rare. To my mind, the letter-sorter, the proof-reader, and persons employed to check mechanical labour, run the greatest risk of breaking down from this cause. A clerk or an accountant may suffer from the monotony of his work, but with all its dryness it is not so absolutely uniform as that of the man who sorts letters, signals trains, or corrects proofs under the pressure of time.'

TO CORPORATE BODIES, RURAL SANITARY AUTHORITIES, GAS COMPANIES, AND OTHERS INTERESTED IN THE MANUFACTURE OF GAS.

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Messrs. FERRIS & COMPY. beg to direct the attention of the Medical Profession to the following important and unsolicited Testimonial to the value of NEPENTHE, which they have received from GEO. C. SEARLE, Esq., of Brixham, Devon, M.R.C.S., L.S.A., Medical Officer of Health, Brixham, &c. :—

'Brixham, October 1881.

'GENTLEMEN,—I should like to bring before your notice the very great benefit two patients of mine have derived, and are still deriving, from the continued use of NEPENTHE.

'The first case is that of an old lady nearly 80, who has been suffering now for many years from an ulcerated leg, accompanied at night with very great pain, so much so as to prevent her sleeping. About eight years ago I persuaded her to try a dose of NEPENTHE at bed-time, and she continued taking a dose regularly *every night ever since*, without any of the bad symptoms generally induced by the continued use of an opiate, but on the contrary is now, although so aged, in better health than she was eight years ago.

'The other case is that of a cancer of the face and neck (a very bad case): here there was an intensity of pain which nothing seemed to relieve, although opium, morphia, chloral, and every other sedative which could be thought of, had been tried. I at last tried the NEPENTHE, and the result has been an entire cessation of the pain, which has not yet returned, although he has had the medicine now for some weeks. I may mention that in the first case it has not been necessary to increase the dose, and in the latter not to any great extent, which I consider another great advantage NEPENTHE possesses over other preparations of opium. 'GEO. C. SEARLE.'

From 'THE LANCET,' December 18th, 1869.

'NEPENTHE, OR ANODYNE TINCTURE, prepared by Messrs. FERRIS & Co., Bristol.—This preparation really consists, as stated, solely of opium, resembling somewhat the liquid extract of the British Pharmacopœia. It is claimed for it that it does not produce headache, stupor, giddiness, depression of spirits, diminution of nervous energy, prostration of strength, nor constipation; it is doubtless less stimulating than those preparations of opium made with the solid and crude drug; and a further commendation of NEPENTHE is its uniformity of strength. The NEPENTHE intended for subcutaneous injection is of double the ordinary strength; and that it is really so we have verified by analysis.'

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A MONTHLY REVIEW OF THE

Progress of the Medical Sciences and of Subjects relating to Public Health

EDITED BY ERNEST HART

FOR CONTENTS SEE PAGE XIII

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The following are extracts from RECENT MEDICAL REPORTS. In deference to a feeling prevalent in the Profession, we abstain from publishing the names of correspondents, but we shall be happy to authenticate any of the letters if desired.

Boston. (QUINISM.) July 12th, 1884.
I have prescribed your SYR. HYDROBROM. in a great many cases with very marked benefit. The Quinine and Iron are better tolerated in this combination than in the form of Easton's Syrup, or any other that I know. As a nervine tonic it is admirable. ——— M.D.Edin.

Limerick. (ANÆMIA.) July 13th, 1884.
I have tried your SYRUPS OF THE HYDROBROMATES with marked success in *Anæmia.*
——— L.R.C.P.Edin.

Bardney. (CHOREA.) July 14th, 1884.
I have much pleasure in stating that I have found your SYRUP OF THE HYDROBROMATES most efficacious in the treatment of a case of *Chorea.* ——— M.B.Dub.

(NERVOUS EXHAUSTION.)
Cheltenham. July 14th, 1884.
I have prescribed your SYRUPS OF THE HYDROBROMATES in several cases, and I have found them very beneficial where *Headache* and *Irritability*, due to *Nerve Exhaustion*, were the prominent symptoms.
——— M.B.Glasg.

(ANÆMIA AND NERVOUS IRRITABILITY.)
Huntley. July 14, 1884.
I have found your SYRUPS OF THE HYDROBROMATES, to be of great value in cases of *Anæmia*, of *Nervous Debility*, and of *Nervous Irritability* generally, and in most cases have had results highly satisfactory.
——— M.B.Edin.

Crossakiel. (ANÆMIA.) July 17th, 1884.
I have tried your SYRUPS OF THE HYDROBROMATES, and have much pleasure in stating that I have found them most useful in cases of *Anæmia*, accompanied with slight *Chorea* in children. ——— L.K.Q.C.P.Irel.

London. (NERVOUS DEBILITY.) Aug. 4th, 1884.
I have great pleasure in stating that I have found your SYRUPS OF THE HYDROBROMATES extremely useful in a severe case of *Nervous Debility.* I hope to use these preparations in similar cases. ——— M.D.Lond.

Burton-on-Trent. (QUINISM.) July 25, 1884.
I beg to say that I prescribed your SYR. HYDROBROM. C. STRYCH. in a case of *Anæmia* and *extreme nervous prostration*, following a severe attack of *Pneumonia.* I had before prescribed Parrish's Syrup and Quinine, but found your preparation greatly superior, from the fact that it produced none of the head symptoms previously found in the exhibition of Quinine by itself.
——— L.R.C.P.Edin.

Blackpool. (CHOREA.) August 4th, 1884.
I have much pleasure in stating that I gave your SYR. HYDROBROM. to a patient convalescing from *Chorea*, with some nervous symptoms and systolic bruit remaining. She derived considerable benefit, the former altogether disappearing, and the latter improving so much that she was not aware of any cardiac weakness.
——— M.D.Aberd.

(ANÆMIA AND NEURALGIA.)
London. August 6th, 1884.
I have found your SYRUPS OF THE HYDROBROMATES very efficient in *Anæmia*, *Neuralgia*, and *General Debility*, especially in cases described as nervous and epileptiform. ——— M.D.Edin.

Clonmany. (EPILEPSY.) August 25th, 1884.
I have much pleasure in stating that in the case of *Epilepsy* in which I used your SYRUP OF THE HYDROBROMATES the patient rapidly improved and gained strength, the fits becoming milder and less numerous.
——— L.K.Q.C.P.Irel.

Perth. (QUINISM.) Sept. 4th, 1884.
The SYR. HYDROBROM. which you forwarded I found a very efficient preparation. Since then I have prescribed your SYRUPS OF THE HYDROBROMATES with marked success, especially in cases of *Nervous Debility*, in which Quinine in any form could not be tolerated. I believe them to be very valuable preparations.
——— M.B.Glasg.

London. (EPILEPSY.) Sept. 10, 1884.
I am pleased to state that in a case of *Epilepsy* your SYRUP OF THE HYDROBROMATES answered satisfactorily.
——— M.B.Glasg.

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The London Medical Record.

Article 3639.

WITZEL ON THE INDICATIONS FOR CHOLECYSTOTOMY.

In a contribution on abdominal surgery, contained in the *Deutsche Zeitschrift für Chirurgie*, Band xxi., Heft 1 and 2, Dr. Oscar Witzel puts on record a case of dropsy of the gall-bladder with calculus, treated successfully by laparotomy and incision of the sac. In the comments on this case it is stated that operative interference in affections of the gall-bladder and gall-ducts was first recommended by J. L. Petit, who, in 1743, communicated to the Royal Academy of Surgery of France four cases of puncture of the bladder, and one in which he had made a free incision for the removal of a calculus.

The reasons for operating in disease of the excretory apparatus of the liver, and the objects sought in such treatment, vary much, Dr. Witzel points out, in different cases, according as the surgeon has to deal with persistent occlusion of the ductus choledochus and complete retention of bile, or with occlusion merely of the cystic duct and consequent dropsy or empyema of the gall-bladder. In the first class of cases cystotomy is practised with the view of affording an outlet to the retained bile, and of preventing the injurious results in the liver, and also in the whole organism, of any large accumulation of this secretion. Here the operation is performed, with the same view as enterotomy in cases of intestinal obstruction, to remove a pressing danger to the life of the patient. In cases of dropsical distension or of empyema of the gall-bladder, the surgeon operates with the view, not only of giving some relief, but also of effecting a permanent and complete cure. The distended gall-bladder is in constant danger of being ruptured and of discharging its fluid contents into the peritoneal cavity; and so it is necessary in a clear case of this kind to incise, empty, and drain the sac; but beyond this the surgeon endeavours to remove the primary cause of the disease, which is usually an impacted calculus.

There are several morbid conditions by which an obstruction may be caused to the flow of bile through the ductus choledochus. As in the case of any other tubular structure, the causes of occlusion of the common bile-duct may be arranged in three classes. The first contains entozoa, such as worms, liver-flukes, and hydatids, which never form permanent obstructions, and gall-stones, which rarely remain long in the common duct, since such bodies of this kind as could not pass through the canal are usually arrested at the neck of the gall-bladder. In cases of occlusion submitted to laparotomy, the cause is usually one of the changes in the walls of the duct which constitute the second class. Of these the most frequent are—1. thickening of the walls of the duct by new deposit of connective tissue as a result of some inflammatory process; 2. atresia of the duct caused by adhesion of opposed portions of its inner surface, after ulceration of its mucous membrane; 3. tight callous stricture formed by circumscribed deposit of connective tissue in the submucous tissue. In the third class of cases, which are not, as a rule, amenable to operation, the closure of the canal is the result of external compression. In a large majority of such cases this pressure is caused by a malignant growth in some neighbouring organ, as the stomach, the duodenum, or pancreas. In some instances it is due to enlargement of one or more lymph-glands, and may be caused also by an aneurysm near the liver, or by any one of the numerous forms of abdominal swelling that may be developed in this region.

In the diagnosis of the special condition in which the idea of an operation might be suggested, it is very important to make out by a careful study of the clinical phenomena, and by abdominal palpation whilst the patient is under the influence of an anæsthetic, whether the obstruction be due or not to malignant disease; for, if such disease be present, operative treatment can give but temporary relief, and might accelerate the progress of the cancerous growth. Four instances have been recorded of operative treatment of persistent occlusion of the common bile-duct, one only of which proved successful. On the other hand, the affections of the gall-bladder following occlusion of the cystic duct, such as dropsy or cystoid distension of the gall-bladder by a mucous fluid unmixed with bile, and also the inflammatory swelling or empyema of this sac, have been submitted to operative treatment much more frequently, and generally with good results.

The reasons for interfering in cases of dropsy of the gall-bladder, are those which hold good in any other kind of intraperitoneal cystic tumour. An operation is indicated so soon as the tumour has become troublesome by its weight and by its interference with respiration. The main indication, however, is the danger of rupture of the cyst and of consequent peritonitis. The condition of empyema of the gall-bladder, in which the accumulated fluid is of a purulent or sero-purulent character, is much more grave than that of simple dropsy. The walls of the sac are now softened and degenerated, and rupture is, therefore, more imminent. As under any circumstances the patient will be more or less feverish, it becomes necessary, in dealing with empyema of the gall-bladder, as with any other form of purulent collection, to follow the rule, *ubi pus, evacua.*

Any one of the above-mentioned causes of occlusion of the common bile-duct may, when influencing the cystic duct, give rise to hydrops and empyema of the gall-bladder. By far the most frequent cause is the presence of one or more gall-stones either in the bladder or the cystic duct. The concretion causes obstruction, either directly by impaction at the neck of the bladder in the cystic duct, and mechanical interruption of the passage of the bile, or indirectly by setting up through long contact ulceration of the mucous membrane of the duct and subsequent cicatricial closure of the canal. After absorption of the bile and mucus contained in the bladder at the beginning of the obstruction, the cavity becomes occupied and distended by serous fluid. When gall-stones are present in the bladder, this fluid takes on a purulent or sero-purulent character. In simple dropsy, the walls of the distended bladder are thin and very rarely present any patches of fibrinous or calcareous deposit; and there is no tendency in the tumour to contract adhesions with surrounding parts. In empyema the walls are usually thickened, but occasionally ulcerated here and there on their inner surfaces. In a case of considerable distension of the gall-bladder a large pyriform tumour is formed which is fixed above and freely movable from side to side at its lower part, whilst it cannot be depressed towards the pelvis. A clear sound on percussion over the pedicle of the tumour, due to the presence here of distended intestine, is likely to confuse the diagnosis by leading to the impression that the swelling is not connected with the liver. Occasionally there is a distinct constriction in the body of the tumour. The distinction between simple dropsy and empyema cannot be easily made until an advanced stage of the affection, when, in the latter case, there would be fever, rigors, nocturnal sweating, and possibly some phlegmonous redness of the abdominal wall over the tumour. In the treatment of the consequences, both primary and remote, of obstruction of the cystic duct, laparotomy has been applied with much success, as has lately been shown by Musser and Keen in a very important contribution to the October number of the *American Journal of the Medical Sciences.*

W. JOHNSON SMITH.

ARTICLE 3640.

CHOLECYSTOTOMY AND CHOLECYSTECTOMY.

THE following remarks are taken from the *Philadelphia Medical News* of Dec. 20, 1884.

During the present year three important contributions to the operations of incising and excising the gall-bladder have appeared in the *British Medical Journal* for May 3, the *Deutsche Zeitschrift für Chirurgie*, Band xxi., Hefte 1 and 2, and the *American Journal of the Medical Sciences* for October, from the pens respectively of Lawson Tait, Witzel, and Musser and Keen. In addition to the cases contained in these papers, Courvoisier, of Basle, has recorded in the *Correspondenzblatt für Schweizer Aerzte*, No. 15, a successful cholecystotomy and a recovery after cholecystectomy; and we have to add to the cases of both procedures, tabulated by Musser and Keen, cholecystotomies from the practice of Trendelenburg, reported by Witzel, of König, recorded in the *Verhandlungen der Deutschen Gesellschaft für Chirurgie* for 1882, of Boeckel, referred to in the *Gazette Médicale de Strasbourg*, No. 8, 1884, and of Courvoisier, as above indicated. In addition to the case of extirpation of the gall-bladder by Langenbuch, which constitutes No. 12 of the table of Musser and Keen, that surgeon has had two other successful operations, a record of which may be found in the *Verhandlungen der Deutschen Gesellschaft für Chirurgie* for 1883; while, as we have just pointed out, Courvoisier's patient recovered.

From these data, it will be our object to present our readers with a summary of the present state of our knowledge of the most important points concerned in the two operations. In order that there may be no misunderstanding, we have to state that the cases of Hughes, Brown, Blodgett, and Keen, in which the abdominal cavity, but not the gall-bladder, was opened, are excluded.

1. Cholecystotomy was first practised by Dr. J. B. Bobbs, of Indianapolis, on June 15, 1867. Fifty small calculi were removed from the bladder, the incision in it was closed by one point of suture, and the woman recovered. The operation has been practised at least twenty-seven times: by Tait in thirteen cases, by Keen in two cases, and by Bobbs, Sims, Ransohoff, Von Winiwarter, Gardner, Eddowes, Savage, Courvoisier, Trendelenburg, König, Boeckel, and a surgeon referred to by Tait, each in one case. Of the twenty-seven, twenty-one recovered and six died, the fatal result in three having been due to collapse and hæmorrhage, in two to collapse alone, and in one to a probable escape of bile into the peritoneal cavity. In twenty of the operations the edges of the opening in the gall-bladder were at once stitched to that in the abdominal wall, thereby forming a temporary fistula. In the case of Sims, a portion of the viscus was extirpated previous to sewing it to the superficial wound. In the case of König, the belly was opened; the gall-bladder was attached to the abdominal wall by sutures, and not incised until the tenth day. In Kocher's case, adhesions were excited by placing a bit of Lister's gauze in the wound, and the gall-bladder was incised on the seventh day. In three of the remaining exceptional examples the incision was closed by sutures and the organ returned into the abdomen. The case of Bobbs, in which one stitch was used, recovered, as did that of Courvoisier after the continuous suture; while the patient of the surgeon referred to by Tait died from the escape of bile into the peritoneal cavity after the use of the continuous suture. In the seventh exceptional case, Von Winiwarter established a fistula between the gall-bladder and the small intestine. This was effected by uniting them with stitches, suturing the intestine to the abdominal wound, opening the gut on the fifth day, puncturing the opposed surfaces through the incised intestine, and, finally, closing the latter with sutures. Hence, this operation was not an ordinary cholecystotomy, but a cholecyst-enterostomy.

Several different methods of operating have been adopted. With the view to prevent the escape of bile or mucus into the peritoneal cavity, Kocher excited adhesions between the viscus and abdominal wall before opening the former, by inserting a bit of gauze in the wound, and König stitched the bladder to the belly, the procedure being similar to Howse's operation for gastrostomy. The former method should be rejected, while the latter is scarcely indicated, as peritonitis was not induced in a single one of the twenty cases in which the bladder was accurately sutured to the wound in the abdominal wall before it was opened. During the operation, the escape of the contents of the gall-bladder into the peritoneal cavity may be prevented by using Keen's scoop, while the subsequent adhesions which rapidly form obviate secondary dangers of this kind. Hence we conclude that the ordinary procedure is worthy of common acceptance.

In three cases the incision in the gall-bladder was closed with sutures, and the organ returned into the belly. Two recovered, and one died from the escape of bile into the peritoneal cavity. Tait declares that this procedure is dangerous in consequence of the periodical filling and emptying of the bladder, and because, if a stone be left in the cystic or common duct, the wound is liable to reopen. The only objection to the ordinary procedure is the formation of a permanent fistula, which happened in at least three instances; but, as this is merely a source of inconvenience, we agree with Tait and Keen in rejecting suture of the gall-bladder.

2. Cholecystectomy is said by Tait to have been done six times, with three deaths, but it is quite certain that all of the operations were not total. Excluding the case of Sims, in which during the operation of cholecystotomy a portion of the bladder was cut off before attaching it to the abdominal incision, and the case of partial extirpation of S. W. Gross, which was merely incident to nephrectomy for carcinoma, we find only four recorded cases, three from the practice of Langenbuch and one from that of Courvoisier. All recovered; so that with this limited experience, the procedure has to be pronounced free from danger. The operation is performed by first dissecting the bladder from its connections with the liver and then tying the cystic duct. Langenbuch's reason for resorting to it is, because it removes the cause of the formation of biliary calculi. Should the common duct be patulous, the operation may be done, but if it be obstructed by an unremoved or undiscovered stone, the procedure is not justifiable. Under any circumstances, we are disposed to think with Tait and Keen that, in view of the comparative safety of cholecystotomy, extirpation of the gall-bladder exposes the patient to a needless additional risk, and that it should, therefore, be abandoned.

Article 3641.

PETRONE ON THE BACTERIA OF CHOLERA.

The studies of Dr. Petrone, carried on during the late epidemic in Naples (*Gazz. Med. Ital. Lombardia*, Nov. 22, 1884), confirm those of Koch and his school, while differing from them in some important particulars. His method of staining the bacteria in fresh cholera stools or vomit was this. A drop of the liquid to be examined was allowed to fall on the cover-glass, which was then heated in the flame of a spirit-lamp. It was then stained with a watery solution (one per cent.) of methylene or aniline blue, containing ten per cent. of alcohol. After twelve to forty-eight hours it was washed with alcohol, cleared with oil of cloves, and mounted in Canada balsam. With this method he has stained the characteristic fæcal matter and vomit from one hundred and fifty cases of cholera, seventy cases of cholerine, and fifty of choleraic diarrhœa.

In the fæcal matters from all the cases of cholera, and from the greater part of the cases of cholerine and choleraic diarrhœa, he found constantly the following bacteria: *a.* comma-bacilli of Koch; *b.* spirals, or screw-like spirilli; *c.* straight and curved rods, moniliform; *d.* spirilli, S-shaped, of identical structure with the rods; *e.* small round cocci.

a. The comma-bacilli (?) of Koch were smaller than those of tuberculosis by a half or two-thirds, but thicker and more massive, with a marked incurvation, generally less than that of a comma, but sometimes greater, assuming the form of a semicircle. The double S curve was never seen.

b. Spirals.—In many preparations, the so-called spirals of Koch were seen by the side of the comma-bacilli. They were formed by the union of individuals in every respect similar to the so-called bacilli of Koch. The spirals were of different lengths, some being formed by more than ten joints, others by not more than five or six. These bacteria coloured like the comma-bacteria.

c. Rods.—With the comma-bacilli, in all the preparations, were observed certain bacteria in the form of straight rods, often curved at one of their two extremities. These were as long as the bacilli of tuberculosis, slender, and striated transversely. They were well coloured by the methylene blue, and stood out among the other elements by their shining dark blue colour.

d. Spirilli.—These took the form of S. They presented the characters of the rods, and had the same striation and thickness. They appeared to be formed of three straight rods, united together, assuming afterwards the serpentine form. The rods and spirilli in form of S were related, and had nothing to do with the so-called spirals and comma-bacilli. Petrone holds that these spirilli are those which Koch has described as comma-bacilli with the double curve.

e. Cocci.—In all the preparations quantities of small, round, refractive cocci were seen, black-blue in colour. Rarely large spirilli, S-shaped or spiral, in large circles, shining-black, were seen, and frequently the bacteria of putrefaction. Both these were doubtless extraneous bacteria, and do not merit description.

To study the phenomena of the multiplication of the bacteria of cholera and to determine the genetic relations between the five varieties of bacteria above described, Petrone examined carefully fresh uncoloured preparations. In these preparations, all five kinds were seen to be endowed with vigorous life. The movements of the so-called comma-bacillus were lively and characteristic; it was never seen to alter its curve or to become straight. The spirals moved in the same way identically, every movement made by them resulting from the movement of each of its elements. The similarity of structure of the elements of the spiral and of the comma-bacillus is evident. The straight rods and the S spirilli are active in movement, the rods tending while moving to become spirilli, changing extraordinarily in curvature. The spirilli become more spiral. The rods show very plainly their transverse striæ. They are formed, so to speak, by a shell of palish white substance and by a cylinder of shining black colour, with tranverse striæ. The same description applies to the spirilli. The cocci also are very mobile. Observing hour by hour the phenomenon of multiplication, at a given moment, the primitive spiral is seen to divide into two secondary spirals, and each of these into two other tertiary spirals. Finally, the spirals resulting from the fusion of two or three elements, are segmented in the point of union of two elements, which, on being liberated, become true comma-bacilli. Hence the spiral is the primitive bacterium; the comma-bacillus is only an element of the spiral set free. The comma-bacillus, therefore, is not a true bacillus. It stands in the relation to the spiral as a mature proglottis stands to the tænia. The spiral then represents a colony of comma-bacilli. Observation equally shows that the little cocci result from the segmentation of the rods at the striæ. However, it may be said that the cocci stand in the same relation to the straight rods as the comma-bacilli do to the spirals. Whether there is a similar relation between the rods and the spirilli in the form of S, is not known.

Injections of cholera matter were made in the stomach in many animals, with always a negative result. Animals fed, too, with the same fæcal matters gave a like result.

Cultivations in Beef-Tea.—This is a very favourable soil for the development of the bacteria. In twenty-four hours there was a numerous progeny of spirals, comma-bacilli, spirilli in S, straight rods and cocci, all in very active movement. The beef-tea must be alkaline; the microbes perish as soon as it becomes acid. The cultivations cannot be prolonged beyond three days; the rapid multiplication of putrefactive germs leads to the death of the cholera bacteria. The latter vegetate well between 18° and 40° C.; below 16° vegetation ceases. Exposure to a temperature of 6° C. arrested the development, but some drops of this cultivation, added to a tube containing gelatine, gave rise to a vigorous growth of the bacteria. Exposure to a temperature of 10° below zero for some hours did not sterilise the cultivation, since multiplication of the bacteria began again vigorously on the temperature being carried to over 17° C.

Cultivations in Gelatine.—Gelatine also is a good soil. The colony has marked granular aspect, the gelatine is liquefied in the vicinity of the bacteria, which penetrate deeply into the mass of the gelatine.

In Milk.—The bacteria grow well. The milk is unaltered.

On Fruit.—On slices cooked or raw, with a favourable temperature, growth is vigorous.

On Vegetable.—On the leaves of salad, turnip, broccoli, cabbage, the bacteria grow well. On linen, flannel, and cotton, the bacteria grow well if the cloth be damp; in water, also, especially in marsh waters, since the nutritive principles are more abundant.

Injections under the skin of animals with the cultivation-liquids gave only negative results; animals also fed with these liquids had no symptoms of cholera.

Substances which arrest the development of the bacteria of cholera.—Arrest of development is not equivalent to disinfection, it must be observed. Of a watery solution of iodine (1 in 4,000), 1 cubic centimètre mixed with 10 cubic centimètres of the cultivation-liquid had no effect on the vegetation of the bacteria. Alcohol, in the proportion of 10 per cent., arrests the multiplication of the bacteria. Chloride of sodium, in the proportion of 3 per cent., is inactive. Tannic acid (1 per cent.) arrests the growth of the bacilli for a few hours only, after which it takes place as if the acid were not present. Sulphate of iron is active in the proportion of 2 per cent., but the bacilli are not killed. Alum (1 per cent.), camphor (1 in 300), carbolic acid (1 in 400), oil of peppermint (1 in 250), sulphate of copper (1 in 2,500), quinine (1 in 5,000), and corrosive sublimate (1 in 100,000), arrest the development of the bacteria for many hours, but do not kill them. Laudanum (1 in 100 or 150) not only arrests the vegetation, but kills the greater part of the bacteria. A temperature of above 100° C. kills the bacteria without exception, but exposure must be prolonged. The bacilli in the dry state do not live beyond twenty-four hours. Putrefaction also kills them. The blood of cholera patients loses its alkalinity, becomes neutral, and finally acid. The red corpuscles are diminished and altered in structure, and the white corpuscles are increased. The microbes of cholera are never seen in the blood. G. D'Arcy Adams, M.D.

Article 3642.

GARDNER ON PLANTS USED AS MEDICINES IN CHINA.

In an appendix to a Report on the trade of Ichang for the year 1883, Mr. Consul Gardner has given lists of the animal, mineral, and vegetable products of the Ichang Consular District, and mentions the uses to which many of them are put. The following are the plants referred to as being used for medicinal purposes.

Aconite. The roots of various aconites are used as heroic remedies. I know of three varieties produced in this district:—(1) *Aconitum sinense* (monk's-hood); (2) *Aconitum Lycoctonum* (wolf's-bane); (3) *Aconitum variegatum.*—*Acorus.* One variety is used as a tonic, and the root of another as a nutritive.—*Adenophora verticillata.* The root of this campanulaceous plant is supposed to have the restorative effects of ginseng.—*Ailanthus glandulosa.* The leaves of this plant are used as an astringent.—*Amarantus* (Love lies bleeding) is eaten as a vegetable. *Amarantus oleraceus* (Goosefoot) is also eaten. The root of the amaranth, *Pupalia*? is prescribed for rheumatism and syphilis.—*Amomum.* The paste made from this plant is used to cure wounds. The rhizome of another variety of *Amomum* is used as a restorative, and sells for a high price.—*Anchusa tinctoria* (Borage wort). The root is used in small-pox.—*Andrographis paniculata.* A drug made from this plant is given to new-born infants.—*Angelica.* The root of the *Archangelica officinalis* is given as a tonic, as is also the root of the 'tuh-hua.'—*Aralia chinensis.* A tincture made from this plant is prescribed for rheumatism and syphilis.—*Artemisia Abrotanum* (Southernwood). A decoction from this is given for colds. The *Artemisia Moxa* (Mug wort) is used as a counter irritant. The *Artemisia Dracanculus* (Wormwood) in skin diseases. And another *Artemisia* in puerperal fevers.—*Arums*, *Aroids*, or *Araceous* plants. The number of these in this district is considerable. I have identified the *Arisæma triphyllum*, used as an anæsthetic. The *Arisæma pentaphyllum*, given in apoplexy.—*Atractylodes* is used as a tonic; a lotion is also made from it for sore eyes.—Autumn Tree (*Catalpa Bungei*). Of the leaves of this tree a lotion is made for wounds.

Balsam (*Impatiens Balsamina*). The seeds are given to women in childbirth.—Bamboo. The flavourless bamboo. From the leaves of this bamboo an emollient decoction is made, which is prescribed for diseases of the head and chest.—Barberry (*Berberis* sp.). The root and bark are used as astringents.—Bead tree (*Melia Azedarach*). The fruit of this tree is used as a disinfectant and febrifuge.—Bell wort (*Platycodon grandifolium*) is used as a tonic. Out of the root an imitation ginseng is made.—Bignonia. The flowers are given in puerperal fever and certain female disorders.—Birth wort (*Heterotropa asaroides*). The root is used for rheumatism.—Box tree (*Buxus sempervirens*). Of the wood combs are made, and of the leaves a cooling medicine.—Burr (*Xanthium strumarium*) is used as a tonic.

Camphor tree (*Laurus Camphora*) grows in Chang-yang and Kweichow. The wood forms a staple of native trade. A drug resembling camphor is produced here.—Cassia (*Sophora japonica*) grows in Chang-lo. The buds are used for curing sores behind the ears, and a dye is made from the bark.—

Caragana (?). The root is supposed to confer longevity.—Cart track (*Plantago major*). The seeds are used as a diuretic.—Castor-oil plant. The seeds are used for making castor-oil.—Centaury. Is used as a cooling medicine.—Cherry. The fruit of the wild cherry (*Cerasus*) and the cornelian cherry (*Cornus mascula*) is used as an astringent.—*Chimonanthus fragrans.* The leaves are used as a cooling medicine.—China root (*Smilax sinensis*). A decoction is made from the root.—China scullcap (*Scutellaria viscidula*) is used as a febrifuge.—Chrysanthemum. A lotion for the eyes is made of the flowers.—Cicuta (?) used as a stimulant.—Cinnamon is an article of local trade.—Convolvulus (*Convolvulus reptans* ?), sometimes called the China spinach. There is another edible convolvulus which I have not been able to class, a convolvulus out of the root of which an imitation ginseng is made, and two from which drugs are prepared.—*Convallaria.* Out of this a much-prized Chinese drug is prepared.—*Clematis*, sp. Wood used as a laxative.—Colt's foot, prescribed for coughs.

Dandelion is used as a tonic.—Dogbane (*Apocynum juventas*). The root of this plant is supposed to confer long life and posterity.—*Dolichos trolibus* (?). This is a much-valued plant here. The flower is eaten as a vegetable; the root is given in fevers, and from it a starch is made; the fibres are woven into cloth. It forms an important item in the domestic trade of the district.

Elecampane (*Inula sinensis*). Tonic and stomachic.

Fennel (*Fœniculum vulgare*) is given in dyspepsia.—Ferns. This district is very rich in ferns. Of the *Aspidium*, *Nephrodium*, and *Pteris*, called by the Chinese by the same name, the young fronds are used as food, and of the roots starch is made. A species of fern, probably the *Niphobolus Lingua* (classed by Chinese among sedges), grows in Changlo. It is used as an astringent, and is exported from here in native vessels.—Fumitory (*Fumaria officinalis* and *Fumaria racemosa*), given for jaundice. There is also a yellow variety, resembling *Corydalis lutea.*—Fungus. The peasants in this district employ spare time in gathering various species of fungi, which are used as food and medicine, and form an important item of the domestic trade. The *Fuh-ling* or *Pachyma cocos* is used as a febrifuge and pepsic. Eighteen other fungi of this district are commodities of trade.

Gentian (*Erythræa*). The Chinese call this plant by the same name as the centaury, and employ it in the same manner.—Ginger.—Gingko yew (*Salisburia adiantifolia*). The fruit is used as a peptic.—Ginseng bitter (*Panax Schinseng*) root is used as a tonic.

Hedysarum (bird's-foot). Given for wounds and as an astringent.—Hermodactyl (*Uvularia grandiflora*) is used as a febrifuge, and to increase the milk of mothers nursing.—*Hibiscus.* There are five kinds: *Hibiscus esculentus*, *Hibiscus mutabilis*; two varieties of *Hibiscus syriacus*, white and red; *Hibiscus rosasinensis.* The first is used in skin-diseases and to hasten parturition. The second and third for tumours and pulmonary diseases; and the fourth as a diuretic.—Honeysuckle (*Lonicera*). There are two varieties here, the tendrils of one being used to purify the blood.—Horse-tail (*Equisetum hyemale* ?). Stems are powdered and used as an astringent. Another variety is given to purify the blood. *See* Marestail. House-leek (*Umbilicus malacophyllus* ?) is used as a cooling medicine.—'Hsü tuan' (*Cirsium lanceolatum*) is prescribed as a tonic and for diarrhœa. 'Hsiao-hsien' is taken internally as an anti-scorbutic, and the 'ta-hsien' is made into poultices to apply to boils.

Iris is used in puerperal fevers. The rhizome of the *Pardanthus chinensis* is used for sore throat. Another variety grows wild all over the hills here.—*Ipomœa* (?). Identification doubtful.

Job's tears (*Coix Lachryma*). The seeds are given in lung-diseases.—Juncus. The pith of this plant is used to absorb pus from sores.

Kwei hwa (*Olea fragrans*). Making scent bags of this flower is one of the minor industries of Changyang.

Libanotis. Prescribed for colds.—*Lilium bulbiferum.* The bulbs are eaten to purify the blood.—*Lilium candidum* is given as a tonic.—A much-prized Chinese tonic is prepared from the *Aneilema medicum.*—*Levisticum.* The root of this plant sliced and whole is largely exported as a medicine from Szechuan. It forms an important item in the Ichang Trade Returns.—*Lophanthus.* Two kinds are given as medicine to women.—*Lysimachia.* This is a plant belonging to the primula tribe. Identification doubtful. It is prescribed for skin-diseases and for women in childbirth.

Madder (*Rubia cordifolia* and *Rubia* ?), given for syphilis.—*Magnolia.* It is used as a stimulant. The bark of the *Magnolia hypoleuca* is used as a tonic.—Marygold (*Calendula*) is given as a diuretic. A lotion made from the flowers is used as an eye-wash.—*Melanthium.* 'Pê-pu' is perhaps a species of Melanthium. A prized tonic is prepared from the *Melanthium cochinchinense* and other plants.—*Melissa.* Cultivated and wild, given as a stomachic.—Mint (*Mentha piperita*) is given as an antispasmodic.—Mulberry (*Morus alba* and *nigra*). The liber of the mulberry root is prescribed for convulsions. The paper mulberry (*Broussonetia papyrifera*). Mulberry *Epiphyte.* The last is prescribed for women in child.—*Mylitta lapidescens* or *Luy-wan.* The tuber applied in itch.

Nettle (*Stachys*). The tubers are given for rheumatism.

Oats. I have seen a few oat-fields on the hills. Oats here are used as medicine, and not for feeding cattle.—Oil-tree (*Aleurites cordata* or *Elæococca Vernicia*).—Oil. Several kinds of oil are made in this district, such as oil from sesanum seeds, oil from tea and camellia seeds, oil from beans, oil from *Brassica sinensis* seed, oil from *Jatropha Curcas*, oil from fruit of tallow tree, oil from seeds of cotton plant, oil from *Aleurites cordata*, castor oil. The immense amount of oil made in this district is locally consumed. Oil forms a large item in the food of the people. It is almost their only means of light at night. It is their only preservative of the wood of their innumerable boats and of the frames of their houses. It is also necessary for waterproof clothing as a lubricant, &c., animal fats not being used for these purposes.—Oranges. Several varieties are grown here; they are the best oranges I have ever tasted. We have, among others, golden nutmeg orange (*Citrus japonica*), golden orange (another variety of the *Citrus japonica*), *Citrus Aurantium* (Tangier orange), *Citrus Margarita* (mandarin orange), *Citrus nobilis* (red orange), *Citrus Aurantium* (coolie orange), *Citrus Bigaradia* (thorny orange), *Citrus* ? (another species of thorny orange), *Citrus fusca.* The cultivation of the orange is extending, and the export is increasing, as, as yet, they pass duty free, they do not appear in the Trade Returns. The dried oranges of the *Citrus fusca*, and the peel of the *Citrus nobilis* are taxed on exportation and importation. They are used as tonics.—Orchids. There are several varieties in this district: *Dendrobium Ceraia*, used as a tonic. The stalks of various orchids are eaten as a vegetable. A pretty little orchid, somewhat like the bee orchid, grows wild on the hills here; it is not mentioned in the native Ichang gazetteer. It is called, locally, 'pi-lan-wha.' There are three kinds, red, yellow, and white.

Pepper-wort (*Zanthoxylum alatum*). The leaves are used as stimulants.—*Phytolacca octandra.* Used as an emetic.—*Pæony. Pæonia Moutan, Pæonia albiflora*, used as an astringent; *Pæonia rubra*, used as an alterative; *Pæony* bark is prescribed for female disorders.—*Plumbago zeylanica.* Used as a sudorific.—*Polygonum Hydropiper.* The juice is prescribed for itch.—Poppy. Much grown in this district. The cultivation is increasing. To still further encourage its growth, the *li-kin* (octroi) on the export of native opium has been recently reduced.—*Pterocarpus flavus* (?). The bark is used as a tonic. Identification doubtful. — *Pucrasia thunbergiana.* Root sedative.

Raspberry (*Rubus idæus*). Bark used as an astringent and ophthalmic. — Rhubarb. — Rouge plant. This is a species of *Carthamus* (?). From it is made the Chinese rouge, used as a cosmetic.

Safflower (*Carthamus tinctorius*) is exported from this district.—Sage (*Salvia plebia*). Used medicinally as a restorative.—Sandal wood (*Santalum album*).—Shepherd's purse (*Capsella bursa pastoris*) is eaten as a vegetable here.—*Siegesbeckia orientalis.* Used as an emetic.—*Silene saponaria.*—The seeds and shoots are made into medicine for wounds.—Soap tree (*Gleditschia sinensis*). From the seeds the Chinese make soap.—Spider-wort (*Commelina medica*). Infusion of leaves is given as a sedative. The same as *Aneilema medicum* mentioned above.—Spindle tree (*Euonymus japonicus*) is used as a tonic.—Spurge (*Euphobia*). Root is given in toothache.—Starch is made of the mealy taro, *Pachyrhizus trilobus* (syn. *Dolichos trilobus*, 3), *Pueraria thunbergiana*, *Aspidium root*, *Pteris*, *Nephrodium*, yam, potato, rice, wheat, &c.—Stonecrop is used as a vulnerary.

Tallow tree (*Excæcaria sebifera*). This is a most beautiful and useful tree. From the seeds Chinese extract vegetable tallow. In autumn the leaves are of a brilliant red, and as they are plentiful here they add greatly to the beauty of the scenery. They are hardy plants, and grow from seed. They might, I think, be acclimatised in Cornwall, Devonshire, and South Wales. *Thalictrum*, sp. Given in female disorders. *Trichosanthes.*—The powdered roots are given as a febrifuge.—Turnip. There is a medicine prepared here from turnip seeds.

Uncaria (?). A wine somewhat resembling tincture of catechu is made from this plant, and is prescribed for infantine maladies.—*Valisneria* is given by the Chinese the same name as Marestail.

Water-lily. Of the *Nelumbium speciosum*, there are two varieties used as food. Another species of water-lily (*Euryale ferox*) is used as a tonic and astringent.—Wax tree (*Ligustrum lucidum*) and *Ligustrum japonicum.* It is on these trees that the insect, belonging to the *Fulgoridæ* family of the *Homoptera*, which produces white wax, feeds.

ARTICLE 3643.

BOSSMANN ON THE EFFECTS ON THE HEALTH OF THE INHALATION OF METALLIC DUST.

DR. H. BOSSMANN, of Isselburg (*Friedreich's Blätter für Gerichtliche Medicin und Sanitatpolizei*), writes that, one hundred and eighty years ago, Ramazzini called attention to the *post mortem* appearances of the lungs of men employed in the marble quarries of Northern Italy, *exiguis calculis oppleti*; and a few years later Bubbe did the same with regard to the stonemasons of Seeburg. Pearson, Robin, and Laënnec, were the first to refer the black pigmentation of the lungs to the inhalation of soot, &c.; and in England a number of medical men published their observations on the association of this pigmentation with pathological alterations of the parenchyma in the lungs of colliers. But there were not wanting others who found a difficulty in reconciling the theory of penetration of the lung-tissue by solid particles with the views then held as to its anatomical structure; and Virchow stood forward among those who looked on the pigment as the final product of the degeneration of red blood-corpuscles. Traube and Cohnheim, however, showed the presence of particles of charcoal in the ultimate ramifications of the air-passages; and Zenker, in his observations on the 'iron lung' demonstrated not only the penetration of metallic dust into the lung-substance, but the mode of its transmission and the precise pathological changes it induced. A host of other observers have since pursued like investigations with regard to metallic, siliceous, carbonaceous, and organic dusts; and the whole subject has been exhaustively worked out by Hirt in his treatise on *Staubinhalationkrankheiten.*

The two questions to be answered are: 'By what means does metallic dust enter the lung?' and 'What changes does it set up therein?' In the daily pursuit of their calling, these men inhale large quantities of dust-particles, some rounded, others angular in form; but they are for the most part removed, partly by the action of the cilia lining the air-passages, and partly by the cough which the irritation of the mucous membrane sets up. If, however, the persons in question be compelled continuously to inhale an atmosphere laden with dust, the expulsion of these particles is not complete, and a certain proportion remain behind in the finest bronchioles and alveoli.

Cohnheim showed that those particles which had gained access to the alveoli were taken up by lymph-cells that had not acquired their final character, and were conveyed by them along the course of the lymphatic vessels. Rindfleisch demonstrated the incorporation of these particles with the protoplasm of lymph-cells, but maintained that they were enabled to penetrate the pulmonary parenchyma, and thus to enter the stream of nutrient fluids where they met the lymph-cells, in virtue of their sharp and angular form, aided by any pressure or impulse from behind. The cells with which they come into contact are the stellate connective-tissue corpuscles and the wandering lymph-cells, which last convey the pigment to the glands. Those particles which are not intercepted and taken up by either of these are carried to the roots of the lungs, and reach the glands of the mediastinum, where the countless cells ready to incorporate them into their substance present an insurmountable obstacle to their further diffusion. If the dust be that of iron instead of coal, we have (as Zenker showed) the red iron lung instead of the black coal lung. These theoretical views are fully borne out by the actual distribution of the pigment, as seen in microscopic examination after death.

The first symptoms produced are those of simple catarrh; but these cases rarely come under medical observation, since the men believe that they must go through a process of hardening. This notion is not altogether unfounded, for with many an increased secretion of mucus and habit of expectoration serves to protect them against further and graver consequences; but others are not so fortunate. Continued inflammatory irritation induces hyperplasia of the connective tissue, with occlusion and obliteration of the finest bronchioles and the alveoli, thickening of the lung-tissue, and the formation of nodules; and, not seldom, destruction of lung-tissue and the promotion of bronchiectasis and cavities. We have here the picture of a chronic bronchopneumonia, terminating in caseation or in true phthisis. This process may be complicated by the supervention of tuberculosis, which we may explain in the light of Koch's observations on the tubercle-bacillus, by supposing that a lung in this state of morbid irritation and disorganisation presents a most favourable soil for the development of any bacilli that may chance to be inhaled. Since, however, a very large number of sufferers from the various forms of pneumoconiosis do not become tuberculous, we must assume in these cases a special insusceptibility.

Coming now to the particular classes of workers in metals, we may with Hirt divide them into two categories—viz., miners, and those who are engaged in manufactures. The former are compelled to spend their days underground in hard labour, in a damp and impure atmosphere, and often working in attitudes at once fatiguing and presenting serious obstacles to respiration. The Report of the Royal Commission of 1868 on the miners and colliers of England gave a melancholy account of the general deterioration of health and early decrepitude of all classes, but showed a far higher mortality for the former, pointing to some specially unfavourable conditions existing among them.

Smiths and others may be divided into workers in iron, copper, lead, or zinc.

Of workers in iron, blacksmiths are but little exposed to dust, carrying on their work in well-ventilated shops, or in the open air. The chief causes of disease among them are great exertion, extremes of temperature, and too often excessive indulgence in alcoholic drinks.

Cutlers, tool-makers, nail-makers, locksmiths, and sword-makers do not seem to suffer much from inhalation of dust; but file-grinders, according to Hirt, show a proportion of lung-diseases twice as great as that of any other class (91·8 per cent. of admissions to hospital). The health of others depends far less on the nature of their work than on the conditions amid which it is carried on.

The grinding trades have long been known as among the most unhealthy. In Sheffield, the mean duration of life of the general population is 55 years, but that of the knife-grinders is 32. Oldendorff found in and around Solingen the general mortality to be 19·6 per 1,000; that of iron-workers was 22·9, and of grinders 30·4 per 1,000 annually. According to Knight [but this was at least sixty years ago.—*Rep.*] out of every 100 grinders in Sheffield, 69·6 suffered from affections of the lungs, of other workmen only 22·4; and, according to Fox Favell, the majority of fork-grinders die under 30 years of age. But, to show how this fearful loss of life may be avoided by judicious arrangements, Hirt mentions a needle-factory at Iserlohn, where, among 200 hands, the mortality for several years had averaged 2·6 per cent., and the mean age at death of twenty-six grinders was 50 years.

An industry in which, though on a smaller scale, the sufferings caused by iron dust are not less, is that of preparing the paper used by goldbeaters—blotting paper, into which oxide of iron is rubbed by a piece of felt. It was in such a factory that Zenker made his first observations on the iron lung; and Merkel says that the conditions under which the girls work are so bad, that it is a wonder that any survive long.

The presence in the lungs of other metals has not been proved. Copper dust is too heavy to be easily inhaled, and it is only brass-founders, workers in bronze, and, under certain circumstances, pin-polishers, who suffer either from the mechanical irritation or the toxic effects. Bronzing is by far the most unhealthy of these occupations; the metal, being beaten in iron mortars to a fine powder, so fills the air with dust that the persons of the workmen appear as if covered with gold.

Lead dust is seen under the microscope to consist of finely rounded particles; the irritation it produces is almost none, but the toxic effects are more considerable. White-lead making is a deadly employment. Type-founders, tin-plate-workers, and others engaged in melting alloys of lead, tin, antimony, &c., are exposed to more or less toxic fumes, and, according to De Neufville, their mean lifetime is at Frankfort about ten years less than that of the general population.

Unfortunately, the statistics given by Dr. Bossmann in his paper, though suggestive, are not sufficiently uniform for purposes of comparison; but the tables which he appends from Hirt are highly instructive, though too long for insertion here.

E. F. Willoughby, M.B.

Article 3644.

LETULLE ON A CASE OF CHYLIFORM EFFUSION INTO THE PERITONEUM.

In the *Rev. de Méd.* for September, Dr. Letulle records the case of a boy, eight years old, who had mitral disease consequent upon two attacks of acute rheumatism, enlarged liver, anasarca, double hydrothorax, and chyliform ascites, paracentesis abdominis giving exit to two litres of lactescent liquid. There were excruciating pains referred to the base of the thorax and the lumbar region, which the ingestion of the smallest quantity of food increased, besides originating formidable attacks of dyspnœa. The microscopic examination of the fresh fluid showed a great quantity of emulsified fat, under the aspect of fine refractive granules of variable size. On standing, a deposit of living red corpuscles occurred, very few only being crenated or altered in shape. A few granular leucocytes were also found. On the subsidence of the red corpuscles, the appearance of the liquid was white and milky absolutely characteristic. A chemical examination by M. Satou gave the following results: slightly alkaline extractives, 16·5 grammes per cent.; mineral matters, 0·65 gramme per cent.—(chlorides in abundance, lime, small quantity of sulphates); fatty matters and albumen not estimated; no cholesterine. There was no necropsy.

Dr. Letulle, in considering the etiology, calls attention to the antecedent cardiac affection and rheumatism. Other causes are also generally thought to be cold, wounds, tuberculosis, scrofula, excessive fatigue, and possibly cancer.

There are three theories as to the nature of chyliform effusions. The original one is, that they are effusions of chyle. But, wherever necropsies have been practised, the chyliferous channels have been found intact. The second is that of purulent effusion in the pleural cavities, and slow transformation of pus into a fatty emulsion and disappearance of leucocytes (Guéneau de Mussy). Thirdly, there may form in the serous cavities a fatty emulsion proceeding neither from pus nor from an effusion of chyle (Debove). The pleuritic effusions are stated to result always from old chronic pleurisies, and are consequently inflammatory. From this fact Dr. Letulle inquires as to the state of the peritoneum in abdominal effusions, and recalls a case of Oppolzer, in which he shows that the cause was in all probability a subacute peritonitis consequent upon an anterior cardiopathic state, and possibly (one might say almost certainly) upon successive punctures; for while the first tapping was clear and serous, the subsequent ones showed step by step the transformation of a fibrino-sanguinolent peritoneal fluid into a chyliform liquid. Moreover, at the necropsy, the peritoneum was found 'pigmented, injected, and adherent.' Other cases are referred to, tending to show the same condition of peritonitis. Dr. Letulle suggests the disuse of the term ascites in such cases, and the substitution of 'chronic peritonitis with chyliform effusion.' He regards the so-called chyliform effusion as a granulo-fatty degeneration of effused inflammatory products (fibrine and leucocytes). KENNETH MILLICAN.

ARTICLE 3645.

STRÜMPELL ON ACUTE INFANTILE POLIO-ENCEPHALITIS (CEREBRAL PARALYSIS OF CHILDREN).

STRÜMPELL (*Deutsche Med. Wochensch.*, Oct. 30, 1884) has drawn attention to an affection which he considers to be the counterpart of the ordinary spinal infantile paralysis, or acute poliomyelitis, and only differing from it by its localisation. Acute encephalitis affects almost always children who have been quite well before, and even those who were particularly well developed and vigorous; and it seems most frequent in the first three years of life. No special cause could be ascertained in twenty-four cases, which form the base on which the paper is founded. There is rarely hereditary tendency, although occasionally a brother or sister has suffered from fits; no exposure to cold or wet appeared to have taken place previous to the outbreak of the malady; in a few cases a fall, and antecedent scarlatina and measles, had occurred, but it appears very doubtful whether these were really causative influences.

The initial symptoms of the disease are fever, vomiting, and convulsions. Particulars with regard to the character of the fever have not yet been ascertained; the vomiting appears to be, not gastric, but nervous, as in tubercular meningitis. It is sometimes associated with diarrhœa. Convulsions are generally severe, and apparently combined with loss of consciousness. They mostly affect the whole body, and only exceptionally one side, which afterwards appears paralysed. The initial stage generally lasts two or three days, but may be protracted to the same number of weeks, or even one or two months. In the latter class of cases there are steadily recurring convulsions, which are unquestionably owing to a cortical lesion. It is, however, only after the initial stage has subsided that hemiplegia is noticed, and this is generally tolerably complete. At what period this occurs is difficult to ascertain; but it appears to occur suddenly rather than gradually. As soon as the initial symptoms have disappeared, the children recover their physical health rapidly. Whether they ever die in the first stage is uncertain; but it does not appear improbable that those cases where somewhat sudden death occurs in infants, after cerebral disturbance, are such of acute encephalitis. Most cases, however, only come under observation a considerable time after the invasion of the disease.

The hemiplegia rarely remains complete. The child after a time begins to walk, yet the gait remains awkward and tottering, as a degree of paresis remains, more particularly in the sphere of the peroneal nerve, and permanent muscular contraction is likewise apt to supervene. The arm is, however, more completely paralysed than the leg, and mostly remains useless, especially for the finer movements. Yet even in the arm the paralysis is habitually not as complete as we find it to be in the corresponding affection of the grey matter of the cord. The lower branches of the portio dura now and then show a degree of paresis. The ocular muscles may also suffer, as strabismus has been noticed in children who certainly did not squint previous to their illness.

Besides hemiplegia, we occasionally meet with monoplegia, either brachio-facial or crural. In some cases, there is rather ataxy than paralysis. The affected limbs waste somewhat, but not nearly to the same degree as in poliomyelitis. There is, however, no degenerative atrophy of muscles, and therefore no reaction of degeneration (electrical wasting-test). The palsied limbs appear to be arrested in growth; and in adults who have suffered from this illness during childhood, the arm may be five or six centimètres shorter than its fellow. On making passive movements, resistance is encountered, showing muscular rigidity; and the tendon reflexes are increased not only in the paralysed, but also in the healthy limbs. Signs of motor irritation are not wanting, and are of importance, inasmuch as they show the seat of the disease to be in the cortex of the brain. A portion of the patients remains epileptic throughout life. Epileptiform seizures occur at longer or shorter intervals, and begin in the paralysed side, to which they may remain limited, and are then unaccompanied by loss of consciousness, while more frequently they become general, and are associated with coma. Such symptomatic epilepsies are known to follow all kinds of cortical lesions, cicatrices, depressions by fracture of skull-bones, &c.

Athetosis in the paralysed fingers is an even more frequent sequel than epilepsy, and presents itself in the usual fashion, as slow extension, flexion and abduction of the fingers. These movements are generally increased when the patient attempts to use the hand, thus showing the influence of associated movements, as is likewise the case with the arm when the patient walks or runs. Where the palsy affects the right side, language also suffers; the child learns to talk only late in life, and his pronunciation is indistinct and defective. The intellect may become normally developed, but some patients are found to be stupid or imbecile; others are spiteful, disobedient, with tendency to lying, concealing, &c. Sensibility is, as a rule, normal.

The analogy of cerebral with spinal infantile paralysis is therefore very striking. In both diseases, it is healthy children who are affected with preference, and that in the first few years of life. The initial stage is almost identical in both; and a palsy remains which shows lesions of the motor area, affecting in the one the anterior grey matter in the cord, and in the other the motor area of the brain. This entails certain differences in the symptoms, which, however, are owing not to a different nature, but only to the different localisation of the disease. It is in both cases the grey matter which is affected, and the lesion in the cerebral form of the malady is shown to be cortical, not only by the distribution of the paralysis, the epilepsy, and athetosis, &c., but also by *post mortem* examinations, which have shown porencephalic defects in the central convolutions, which were evidently not congenital and due to arrested development, but of inflammatory origin; in fact, cicatrices, resembling the shrinking of an anterior horn subsequently to an attack of poliomyelitis. Strümpell is therefore inclined to consider both affections identical in their nature, and only differing in so far as the morbific influence, which is possibly of an infectious nature, in the one case invades the motor area of the brain, and in the other that of the spinal cord.

JULIUS ALTHAUS, M.D.

ARTICLE 3646.

SAUNDBY ON A REMARKABLE CASE OF RENAL COMA.

IN the *Med. Times and Gazette*, November 1884, p. 606, Dr. Saundby reports a remarkable case of a girl, aged 20, who was admitted into the General Hospital, Birmingham, and died three days subsequently from renal coma. The *post mortem* examination showed all the organs to be healthy, excepting the kidneys. The right kidney weighed only 1½ ounces; its ureter was patent; its pelvis was dilated and contained a calculus of the size of a pea. The medullary and cortical substances were indistinguishable, and together measured only a quarter of an inch in breadth. The capsule stripped off readily. In the left hypochondrium there was a large mass, on the surface of which, and adherent to it, were the duodenum, pancreas, and descending colon. The entire mass, when removed, weighed 38 ounces. On section it was composed of an external cyst-wall, within which was a mass of recent blood-clot; inside this was the left kidney in a condition of saccular dilatation. All normal kidney-structure was absent. The pelvis of the kidney contained an irregularly shaped calculus of the size of a bean, and another smaller calculus lay in one of the saccules. The ureter was dilated, but not patent. The bladder was not enlarged. The uterus and ovaries were quite normal.

How long the patient had managed to exist with such apologies for kidneys it is impossible to say, but her acute symptoms dated from the occurrence of hæmorrhage into the wall of the sac fourteen days before her death. The peculiar interest attached to the case is, that the symptoms which were present during the last thirty-six hours of life resembled closely the form of coma which is known as Kussmaul's coma, and has been described by him as occurring in diabetic patients.

Commenting upon the case, Dr. Saundby says that we must first decide upon what we mean, if we describe the case as one of uræmia. Confining our attention to cases in which the urinary excretion is obviously at fault, two very distinct types of toxic disturbance may be recognised. In the first, the patient has a moist tongue, headache, loss of vision, vomiting or diarrhœa, convulsions, and coma. This is the type of uræmia associated with Bright's disease. In the second, the patient is in a typhoid condition, with dry tongue and a feeble pulse, but his intelligence and special senses are normal, and there may be neither convulsions nor coma; and yet such a patient may not excrete by the urinary passages a single drop of urine for days or even weeks. Such symptoms are met with in cases of obstructive suppression of urine.

The theories that have been propounded to explain these phenomena may be divided into two groups—(*a*) mechanical, (*b*) chemical. In the first groups some authorities have attributed the nervous phenomena to œdema of the brain. This led to the theory of Rosenstein, who thought that the initial change was a vaso-motor constriction of the cerebral blood-vessels, leading to convulsions by cutting off the blood-supply, and followed by exudation of serum into the lymph spaces of the brain. Such an hypothesis needs supplementing by the assumption of the presence of some toxic agent capable of stimulating the vaso-motor centre: this leads to the study of chemical theories. The chief of these are the following. 1. The presence of urea in the blood causes the symptoms known as uræmia. 2. The urea is converted in the intestine into carbonate of ammonia, which is reabsorbed into the blood. 3. It has been suggested that ptomaines may play some part in the phenomena of uræmia, but this remains at present a barren hypothesis. 4. It has been proved by experiments that the potassium salts of the urine alone are capable, when re-introduced into the circulation, of producing phenomena resembling those of so-called uræmia. This theory has met with very little support.

Dr. Saundby, however, confesses he is unable to solve the question, and is at a loss to explain the reason why the symptoms met with in the case he reports should resemble so closely those described by Kussmaul as characteristic of diabetic coma.

RICHARD NEALE, M.D.

ARTICLE 3647.

MINKOWSKI ON THE PRESENCE OF OXYBUTYRIC ACID IN THE URINE IN DIABETES MELLITUS.

DR. O. MINKOWSKI (*Archiv für Experiment. Pathologie*, Band xviii., Heft 2) says that Hallervorden discovered that diabetic urine often contained a large quantity of ammonia, which led Stadelmann to suspect the presence of some acid in large quantities, and he actually succeeded in isolating a substance which he identified as crotonic acid. But this identification was incomplete; it was theoretically improbable, as no analogy existed for the presence in the urine of an acid from the series of non-saturated hydrocarbons. At this point Minkowski took up the research. Diabetic urine containing much ammonia is not common; he examined six specimens before he found a case in which it occurred. By a series of manipulations, for which we must refer to the original paper, he succeeding in isolating an acid which he identified as β oxybutyric acid.

This acid, on taking up water, can split into β crotonic acid, so that Stadelmann's conclusion is explained. Moreover, by oxidation it forms aceto-acetic acid, which splits up readily into acetone and carbonic acid. Oxybutyric acid gives no reaction with ferric chloride, but its salts give a reddish-brown coloration, which disappears on acidulating or heating. When the acid taken up by ether gives this colour-reaction, it is probably aceto-acetic acid.

Stadelmann's first patient died of diabetic coma, so that he thought the acid had something to do with the coma. Minkowski's case also died of coma. This suggests some connection between the morbid phenomena and the appearance of oxybutyric acid in the urine. It is difficult to believe that the symptoms could have been directly due to the acid, as this was present for months without any harm resulting. But two theories suggest themselves to explain this connection. The acid may have become converted into some other poisonous substance, or the excess of acid may have eventuated in depriving the organism of alkalies. The former theory would imply the conversion of the acid into aceto-acetic acid or acetone, which is probable enough, but experiments have failed to show that either of these substances is capable of causing the symptoms of diabetic coma. At the same time, their effects on healthy animals may not be the same as under pathological conditions, as Penzoldt's experiments indicate. The second possibility is what Stadelmann meant by acid intoxication. Walter (*Archiv für Exp. Path.*, Band vii.) has shown that acids produce symptoms like diabetic coma, a peculiar dyspnœa, with increases in the depth and frequency of respiration. The excess of acid in the organism must be great when the amount of ammonia in the urine reaches twelve grammes daily. But there are many difficulties in the way of accepting this theory. Walter succeeded in herbivora only in producing a marked diminution of the alkalescence of the blood by the introduction of acids. In carnivora, this was followed by an increase of ammonia in the urine, without any functional change in the animals. Coranda (*Archiv für Exp. Path.*, Band xii., 1881) found that acids acted on men as they do on carnivora. Nevertheless, a great loss of alkali must cause serious changes, and, while organic acids would ordinarily become rapidly changed in the organism into carbonic acid and water, by oxidation, yet in diabetes this process would be greatly impeded. If the excess of acid be capable of producing these evils, the administration of alkalies should do good, but this method was tried by Minkowski without success, the patient dying in spite of it. A solution of carbonate of soda was administered, to a diabetic whose urine showed the presence of a large quantity of oxybutyric acid by the stomach and by the rectum. This was followed by decided improvement, but the urine still remained very acid. Later on he died, and the *post mortem* examination gave a negative result. Nevertheless, the improvement was so marked, as to convince those who saw it that the alkali did good. ROBERT SAUNDBY, M.D.

ARTICLE 3648.

FOURNIER ON THE DIAGNOSIS OF LATE INHERITED SYPHILIS.

In a long communication on this subject (*Annales de Derm. et de Syph.*, Nos. 3, 4, 5, 1884), M. Fournier, after insisting strongly that there is no one sign of inherited syphilis which is in itself *pathognomonic* in the strict sense of the word, goes on to consider in detail the various clinical signs which may be useful in diagnosis. For convenience of description these are divided into the following nine groups.

I. *Constitution, Habit, Aspect.*—The value of indications derived from these is only of a limited kind. As a rule, however, the subjects of inherited syphilis are thin, have their muscular system but little developed, and, what is a more valuable sign, have a pale greyish or earthy complexion. The characters of most interest are negative; that is to say, those who are suffering from inherited syphilis have not the aspect or habit of scrofulous subjects. The former, for example, never have the fine white transparent skin, the delicate rosy complexion, the hypertrophied upper lip, the goose-skin appearance of the extensor surfaces of the extremities, chronic acne of the face, or chilblains on the hands, all of which are common in strumous persons.

II. *Delay, Imperfection, or Arrest in Physical Development.*—These occur in many syphilitic subjects. As children, they are late in learning to walk, and their growth is slow. Even when fully grown, they are puny and stunted. In boys, the testes long remain small like those of an infant; the hair of the face, axillæ, and pubes is late in appearing. In girls, the development of the breasts and the menstrual function are delayed. In fact they look like children when they have attained the age of adolescence, and they keep the appearance of the latter when they have become adults. Syphilis exercises on the organism a powerful influence, which is shown by something more than mere malnutrition. It causes arrest of development and incompleteness of formation, a degeneration of the individual and of the race. Again, syphilis may give rise indirectly to various constitutional states which have nothing specific about them. Thus, it is sometimes the cause of such affections as lymphatism, scrofula, tuberculosis, lupus, rickets, &c.

III. *Deformities of the Skull and Nose.*—These, when present, are very useful in diagnosis, but they are absent in a large number of cases, even when plain marks of syphilis are present elsewhere.

1. The forehead is the part of the skull which is most usually affected. There are three varieties of frontal deformity. In the first the whole forehead is both higher, broader, and more prominent than natural. It is vulgarly called *le front Olympien* in France; and M. Fournier says the English use the term 'bellied' to describe it (*le front ventru*). It is rather commonly seen, but in different degrees; often it is only slightly marked. A second variety, in which the forehead has lateral bumps, is much more frequently met with. The bumps are flattened rounded

swellings, similar in appearance to what would be caused by exaggerated frontal eminences, and are situated on each side of the median line of either a normally shaped or of a too prominent forehead. They are nearly always bilateral, and symmetrical in position and in development. When well marked, the swellings are seen at a glance; but when they are only slightly developed, care may be necessary to distinguish them. A third variety, which is rare, is the keel-shaped forehead (*front en carène*), caused by a more or less distinct vertical ridge along the course of the medio-frontal suture. Owing to this vertical prominence, which is generally two or three centimètres broad, the sides of the forehead have a flattened and receding appearance.

2. Deformities of the lateral and superior portions of the skull are, of course, less apparent than those of the forehead, as they are hidden by the hair. Thus, unless the changes be very marked, they have to be sought for by palpation. The chief peculiarities in these regions are the following. *a.* Bumps or bosses are seen, similar to those which occur on the forehead. Their favourite seat is the parietal bone, and they are most frequently symmetrical. *b.* Transverse enlargement of the skull may result from the lateral projection of the parietal bones. In exceptional cases, this is accompanied by a depression along the course of the sagittal suture, the remains of the condition which, in the infant, Parrot calls 'natiform.' *c.* Sometimes the skull is unsymmetrical, but this is not peculiar to syphilis. *d.* Hydrocephalus occurs in some cases as a consequence of inherited syphilis. It is nearly always quickly fatal; hence the hydrocephalic form of skull is not often met with in later life.

3. Deformities of the nose are frequent, and are sometimes very significant from a diagnostic point of view. There are two degrees of deformity. In the first, there is always a history which explains its presence; in the second the deformity is slight, and neither the patient or his friends can throw any light on the subject. In the first degree are included those cases in which there is obvious and great disfigurement; and these, again, are divided into two classes. *a.* The upper or bony portion of the nose is affected. Here the root of the organ is flattened and the tip is turned up, the nostrils being thus directed more or less forwards and upwards. *b.* The lower or cartilaginous portion is destroyed. Here the appearance is quite different; for it is the lower part of the nose which sinks, and at the same time recedes to some extent within the upper portion, giving rise to what is commonly known as the telescope nose (*nez en lorgnette*). In these two kinds of deformity there is always a previous history of nasal trouble, such as ozæna, and the discharge of pieces of bone or cartilage.

Deformities of the second degree are much more frequent than the preceding. They do not give rise to marked disfigurement, but only to what might be called 'badly shaped noses.' The most usual result is what is commonly called a 'flat nose;' that is, there is more or less loss of convexity of the upper part or root of the organ. Much more rarely the lower part of the nose, especially the alæ, presents inequalities or depressions, which look as though they were due to partial destruction of the lateral cartilages; but the absence of any history of bygone trouble in such cases leads M. Fournier to suggest that perhaps these depressions may be really congenital malformations similar to those by which the teeth are affected. However this may be, such depressions are of real value in diagnosis. They are interesting because their exact cause is obscure, and because they are hardly ever met with except in inherited syphilis.

IV. *Osseous Deformities of the Trunk and Limbs.* These may affect only a part or the whole of a bone. The partial deformities consist of bony swellings, situated almost exclusively on the long bones. Either the epiphysis or the diaphysis may be affected. The upper end of the tibia is not unfrequently enlarged, or the head of the radius or ulna may be affected; sometimes also the malleoli, the anterior extremities of the ribs, or the points of the elbows, are the seat of the swellings.

The shafts of the long bones are at least as frequently affected as the epiphyses. The bones which suffer most commonly are the tibia, ulna, radius, humerus, and clavicle. Sometimes, also, but much more rarely, the phalanges are found swollen or atrophied, as the result of bygone dactylitis, which is not rare in syphilitic infants. Of all the bones, however, the tibia is the one which is most valuable for the purpose of retrospective diagnosis. The shaft is affected much more frequently than the head, and in a special distinctive manner, characterised by four peculiarities, which are often present together. These are: *a.* localised swelling of the bone, of its middle third, for example; *b.* inequalities and nodes of the surface; *c.* transformation of the crest into a surface, that is to say, the crest loses its sharp border, and becomes blunted, widened, and smooth; *d.* apparent pseudo-rachitic curvature of the bone, which arises from partial hyperostosis of the anterior portion, and gives rise to the appearance of a curve with its convexity forwards. All these are the remains of bygone lesions in early childhood, and are indelible signs, of great diagnostic value in later life.

Besides these partial affections there are others in which a whole bone, or series of bones—ribs or vertebræ, for example—may be involved. Thus, the bones of the limbs, especially the lower limbs, may be curved; or the thorax may be deformed (pigeon-breast); or, though much more rarely, the spine may be affected by curvature in various degrees.

It will be seen that several of the affections just mentioned are exactly the same as those usually attributed to rickets. Hence arises the important question of the relationship of syphilis to rickets. This question, as is well known, has been considered most fully of late years by M. Parrot, whose opinion is that rickets is essentially a part of inherited syphilis and merely one of its later phases. With regard to this conclusion, M. Fournier remarks that he does not know that anyone has yet brought forward clinical or anatomical facts equal in number to those adduced by M. Parrot. Consequently, a final judgment must be postponed to some future time. Still, it should be remembered, there are two distinct questions involved. One is of fact, viz.: Does rickets occur with an unquestionable degree of frequency in subjects of inherited syphilis? The other question is one of doctrine, viz.: Is rickets a syphilitic lesion, or is it only an indirect consequence of syphilitic heredity? With regard to the first question, there can be but one answer, for rickets is met with so frequently in syphilitic children, that there can be no doubt about a relation of cause and effect between the two diseases. With regard to the second question, it seems most reasonable, in the present state of our knowledge, to consider rickets in syphilitic children as an indirect result of syphilis; that is, as a consequence of the general disturbance of the organism caused by syphilis, which may thus cause rickets in the same way as it causes constitutional debility, tuberculosis, lupus, malformations of the teeth, arrest of development, &c.—all common consequences of the debilitating influence of a specific disease on the body generally. Thus, though syphilis is responsible for many cases of rickets, it is not the sole cause of rickets.

V. *Cicatrices of the Skin and Mucous Membrane.*—The value of these in the retrospective diagnosis of inherited syphilis—say in a person from five to twenty years of age—depends on circumstances. In many cases, scars on the skin or mucous membrane are of no special utility in deciding as to bygone syphilis; but in other cases they may, from certain peculiar characters, become a valuable aid to diagnosis. First, cicatrices may be suspicious because of their extent. For instance, a scar as large as the palm of the hand could not be due to varicella, scabies, or a boil. Hence a large scar, and, still more, a multiplicity of large scars, would tend to support a suspicion of syphilis. The shape and mode of arrangement of scars are more significant than their size. Thus the round form is a favourite one in syphilis, whilst scars arranged in semicircles, or segments of circles, or arches, or serpiginous in form, are almost always syphilitic. The seat of cicatrices is also of importance. The commissures of the lips and the nose are favourite situations for syphilitic ulceration, and consequently of scars, as are also the loins, buttocks, and the upper part of the backs of the thighs. Thus, while scars for the most part are not in themselves diagnostic, they may help considerably in making a diagnosis. Scars of the palate and throat are very valuable indices, this being one of the most favourable regions for the attack of inherited syphilis.

VI. *Lesions of the Eye.*—Examination of the eyes not unfrequently leads to the detection of traces of bygone lesions, which are very valuable aids to diagnosis in later life. Interstitial keratitis is the most frequent disease of the eye in inherited syphilis. Next come affections of the iris. Next, but more rare, are affections of the choroid; and lastly, in very exceptional instances, zonular cataract. The eyes should always be carefully examined with the ophthalmoscope as well as by lateral illumination.

VII. *Lesions of the Ear.*—These may consist in various affections of the middle ear, or there may be a condition of deafness with the following characters. It comes on suddenly without any of the ordinary symptoms of common otitis; it makes rapid progress; it quickly reaches a degree of deafness of considerable intensity, which is permanent; it is not accompanied by any lesion which can be discovered by the otoscope. In a few months, or even weeks, the deafness may become almost absolute.

VIII. *Malformation of the Teeth.*—These have been previously described (*Annales de Derm. et de Syph.*, Nos. 9 and 10, 1883; and London Medical Record, February 1884). These three groups of lesions—namely, those of the eye, ear, and teeth—are those which were first connected with inherited syphilis by Mr. Hutchinson (*Triade d'Hutchinson*), to whom also is due the credit of having first pointed out their significance and their frequent association in the same person.

IX. *Lesions of the Testes.*—Syphilitic sarcocele, of a kind similar to that which occurs in the acquired form of disease, may attack a child with inherited syphilis at a very early period, sometimes even a few weeks after birth. Both testes usually suffer, and the consequences are much the same as in adults—namely, resolution under appropriate treatment, or induration and more or less atrophy if neglected. As this affection is painless, and the swelling not very considerable, syphilitic orchitis in children is often overlooked; and it is not very rare in later life to find the testes small, hard (sometimes very hard), irregular, sometimes nodular. On inquiry in such cases, no history can be obtained either from the patient or his parents, and this adds to the value of the sign as regards diagnosis; for, in early childhood, almost the only other affections which give rise to atrophy of the testes are injury and mumps, and of either of these there would be a history. Thus atrophy with hardness and irregularity of the testicle, without a history of any acute attack, is a very valuable sign in retrospective diagnosis.

Besides orchitis, but infinitely more rarely, a simple atrophy or arrest of development of the testes is sometimes found, merely as part of the general condition of defective development or *infantilism.*

In the nine groups which have just been under consideration, are included the principal points which are likely to be of value in the retrospective diagnosis of inherited syphilis. Other and more rare affections are the following. 1. *Glandular enlargement* in various regions, most usually the neck, groins, or axillæ, sometimes in the abdomen. The enlargement is indolent and affects several glands. It occurs, also, apart from syphilis; and, therefore, cannot be relied upon in differential diagnosis. 2. *Affections of the Joints.*—*a.* Chronic hydrarthrosis affecting more especially the knee joints. *b.* Changes attended by deformity of the joint, and resulting from morbid processes in the articulations or bones in infancy. 3. Much more rarely, *arrest of intellectual development* in various degrees, even to complete idiocy, is met with.

The diagnostic signs which have been spoken of thus far are only such as are obtainable from examination of the patient himself.

Evidence of a different kind, but of no less importance in retrospective diagnosis, is to be sought in the family.

1. *Excessive Mortality of Children in Syphilitic Families.*—In any case where the diagnosis of syphilis is in question, inquiry should always be made as to whether the mother has had miscarriages, and especially repeated miscarriages; or whether dead children have been born at or before term; also whether any, and if so how many, children of the family are dead, and their age when they died. The answers to these questions may be of the greatest value in diagnosis; for syphilis, though not the sole cause of abortion, and still-births, is certainly the commonest cause both of abortion, still-births, and death soon after birth. This disastrous influence is well shown by M. Fournier's own statistics, which in his private practice showed a mortality of more than two out of every three births in syphilitic families; while in hospital practice, of 167 children born of syphilitic mothers 145 died; that is, only one out of seven or eight children survived; the average of both classes of cases being

about four deaths out of every five children born. This influence of syphilis on the mortality of children was, a few years ago, considered by many to have been exaggerated by M. Fournier, who therefore proceeded to collect during several years all the cases (except his own) which he came across in medical literature. These gave a total of 447 pregnancies occurring in families in which either one or both parents were syphilitic. Out of this number there were 343 deaths, leaving only 104 children who survived. Of the 343 deaths, 337 were either abortions or still-births, or deaths during the first year of life, and mostly in the first few weeks or months after birth. Only six of the 343 deaths were those of children who lived beyond their first year. The exact proportion of the 447 who survived was 1 in 4·3. Several cases illustrating the mortality caused by syphilis are related in this section of the subject.

2. *Family Inquiry.*—The last point considered by M. Fournier, and one to which he attaches the greatest value in the diagnosis of late inherited syphilis, is the information to be gained from the immediate relations of the patient, that is from his father, mother, and his brothers and sisters if he have any. From a scientific point of view, no case of late inherited syphilis can be considered complete without this family inquiry, while in practice the information thus gained in many cases at once clears up the diagnosis, which without such help would have been difficult or altogether obscure.

ARTHUR COOPER.

ARTICLE 3649.

TOURNEUX AND LEGAY ON THE DEVELOPMENT OF THE UTERUS AND VAGINA.*

THE following notes form a summary of a most complete series of observations on the development of the uterus and vagina in the human fœtus, and in some of the lower mammalia.

1. The vagina and uterus (body and cornua) are developed at the expense of the lower segments of Müller's ducts, included between the urogenital sinus and the Wolffian insertions of the round ligaments. These lower segments fuse along the middle line, forming a single *genital* or *utero-vaginal canal;* their upper segments, divergent and situated between the top of the genital cord and the round ligaments, furnish the uterine cornua.

2. The fusion of Müller's ducts begins either in the middle part of the genital cord (pig, mouse, &c.), or by the union of the lower with the two upper thirds; then it progresses upwards and downwards simultaneously.

3. In most mammals, and in man, the divergent lower extremities of Müller's ducts are the last to coalesce. The persistence of this state of divergence in adult woman is indicated by the existence of a double hymen, or better by a hymen pierced by two orifices leading into a single vaginal cavity.

4. The lower extremities of the Wolffian ducts participate in the formation of the genital canal, by fusing with Müller's ducts, and also by the opening of Gartner's ducts, in the cow at least, into the vaginal cavity and not into the vestibule. The lower extremity of the genital canal formed by the fusion of Müller's and Gartner's ducts is at first solid without central lumen.

5. Above, the fusion of Müller's ducts extends to the summit of the genital cord. The more or less marked bifidity of the uterus, according to species, depends entirely on the height of the limit between the vagina and uterus in the genital cord. In the human fœtus, the fundus encroaches steadily on the cornua. The uterus is bicornute till the middle of the fourth lunar month.

6. In the marsupials (*e.g. Didelphys dorsigera*), the non-coalescence of the ducts of Müller is the consequence of a special disposition of the ureters, which, instead of including the genital cord in their curve, are implicated in the very substance of this cord, between the ducts of Müller, which they separate.

7. At the beginning of the fourth lunar month, in the human fœtus, the lower or vaginal part of the genital canal is invested by a stratified squamous epithelium which undergoes transition into the cylindrical epithelium of the upper or uterine portion. These variations in epithelium are due to local modifications of the primitive epithelium of Müller's ducts.

8. As the genital canal elongates and becomes flattened antero-posteriorly in its vaginal portion, the opposed epithelial walls join from below upwards. At the beginning of the fifth lunar month the epithelial lamina, resulting from this union and filling the whole of the vaginal cavity, gives origin at its upper extremity, a little below the line of epithelial transition, to a cupola-like process, flattened antero-posteriorly, which projects into the thickness of the walls of the genital canal and forms a kind of nipple, representing the vaginal portion of the cervix. This is irregular on its vaginal surface, and is corrugated during the whole of fœtal life. The anterior lip is the longest.

9–10. Active epithelial growth in the vagina dilates that canal and modifies the form of the cervix and the *culs-de-sac*, and pushes the lower, somewhat contracted, portion of the vagina into the vestibule, so that a fold is formed below, which becomes the hymen.

11. The rugæ are also formed by epithelial outgrowths.

12. The arbor vitæ is developed very early, about the beginning of the fourth month, in the uterine part of the genital cord.

13. At the end of the fourth month, the grooves between the folds of the arbor vitæ appear.

14. The uterine epithelium is formed by a single layer of cylindrical epithelial cells, of which the height progressively diminishes from the third to the eighth month. The cells are generally higher in the body than in the cervix.

15. After the eighth lunar month, the transition between the cylindrical and the squamous vaginal epithelium becomes sharply defined as in the adult.

16. About the last month of pregnancy, the cylindrical epithelium of the cervix undergoes a mucoid change near the external os.

17. This change extends upwards the entire length of the cervix, and the cervical glands are then formed.

18. This mucoid change produces a mucous plug at the os externum.

19. During fœtal life, and even at birth, the uterine epithelium (body and cervix) is entirely without cilia.

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* Notes on the Development of the Uterus and Vagina, from observations made on the Human Fœtus. *Jour. de l'Anatomie et de la Phys.*, July-August 1884.

20. The uterine glands do not exist at birth.

21. The differentiation of the wall of the genital canal into mucous and muscular coats is not distinct till the beginning of the sixth lunar month.

22. The genital canal is curved, with its concavity forwards. During the last month of gestation the body of the uterus, situated above the true pelvis, is sharply anteflexed on the cervix.

MM. Tourneux and Legay have thus revised the whole subject of the development of the uterus and vagina from actual dissection. Their important contribution is illustrated by a series of engravings which demonstrate very clearly the differentiation of the vaginal portion of the cervix, and the junction of the vagina with the vestibular structures, as seen in fœtal life. As much work has been done in 1884 by Schüller, Sutton, Rieder, Fischel, Harz, and others, on the development of the ovary and the fate of Gartner's ducts, it is satisfactory to find that the other and equally important internal organs in the female have not been neglected. · Alban Doran.

Article 3650.

WÖRNER ON THE TREATMENT OF CYSTIC GOÎTRE BY PUNCTURE AND INJECTION OF IODINE.

In the third and most recent volume of the *Mittheilungen aus der Chirurgischen Klinik zu Tübingen*, Dr. A. Wörner, alluding, in the first place, to two cases in which the treatment of cystic goître by puncture and injection of tincture of iodine was followed by serious, and indeed, in one instance, by fatal asphyxia, inquires whether, and, if so, under what circumstances, this procedure merits further favour.

Since 1856, 76 cases of cystic goître have been thus treated by Professor Bruns, in his hospital practice at Tübingen, and in most of these cases full records were kept of the condition of the patients long after the treatment. Dr. Wörner omits to notice two of these cases, as the patients had passed from observation soon after their discharge from hospital. The youngest of the patients was nine years of age at the time of operation, and the oldest forty-seven years, and 66 were under the age of thirty years. The tumours varied much in size in the different cases, from that of a walnut to that of a man's head. The treatment in each case consisted in puncturing the tumour with a small trocar and cannula, in drawing off the fluid, and in injecting pure tincture of iodine, the quantity of which, even in cases of very large cyst, did not exceed half an ounce.

The results of such treatment, Dr. Wörner states, are usually very simple. Soon after the operation, the patient complains of a 'burning' pain in the neck. This, however, soon ceases, and, as a rule, is no longer felt after an interval of a few hours. In some cases, there are slight disturbances of deglutition and respiration. Occasionally there is an extreme, though very transient, elevation of temperature (104° F.), but in most cases not the slightest reaction can be observed. In the course of the first twenty-four hours after the injection, the cyst fills again, and attains nearly its former dimensions; but the tumour is now firmer, and does not impart so clearly a feeling of fluctuation. It begins to diminish in size about the twelfth day, in favourable cases, and then slowly disappears to be replaced by a hard, movable, and irregularly shaped nodule, which is small and scarcely visible, and causes no pain or uneasiness. After a successful operation, this shrinking of the tumour is completed in from two to three months. If the tumour do not diminish during the first six weeks after the operation, no good result can be expected from the first attempt, but the treatment may yet be repeated with chances of success. The average duration of treatment in hospital of successful cases seems to be about six days.

In analysing the 74 cases treated at Tübingen, Dr. Wörner finds that 45 patients were cured, 11 were much relieved, 17 failed to derive any benefit, and that one died soon after the operation. In 6 cases the treatment by puncture and injection of iodine was repeated, and in 4 of these with good result.

In discussing the probability of any direct evil consequences of this plan of treatment, Dr. Wörner states that difficulty in swallowing and breathing occurs just as frequently after simple puncture as after puncture associated with injection of iodine. The three special dangers supposed to attend this combined method of treatment are: hæmorrhage; inflammation and suppuration of the cyst or of the surrounding tissues; fatal asphyxia. In 2 only of the 74 cases collected by the author is there any record of bleeding, and in each of these it was easily arrested by pressure. An instance is recorded of a large blood-cyst in the neck, which communicated with a venous trunk which was diagnosed as a goître, and punctured, with a speedy fatal result through loss of blood. In one case only did the cyst suppurate, and in two other cases there was suppurative inflammation around the tumour. In each of these cases the patient recovered after free incision. In his treatment of cystic goître by puncture and injection, Prof. Bruns pays strict attention to all antiseptic precautions; and, in Wörner's opinion, subsequent inflammatory mischief is more likely to be due to the accidental access of any specific irritant of inflammation, than to the local action of iodine. Of asphyxia after puncture and injection two cases are here recorded, of which one proved fatal. The first of these instances was one of a young girl, the subject of a parenchymatous and cystic goître, who, before she came under treatment, had suffered from repeated attacks of intense dyspnœa. On examination, there was found to be some compression of the trachea, and paralysis of the right vocal cord. On the fourth day after puncture of the cyst and injection of iodine this patient had another attack of dyspnœa, which was very severe and almost fatal. Tracheotomy was performed, and the goître subsequently extirpated, with good results. The patient in the second and fatal case was a girl, who had also suffered before the date of operation from occasional attacks of dyspnœa, and whose left recurrent nerve was paralysed. Puncture of a cystic goître in this case was almost immediately followed by intense asphyxia, which, notwithstanding a prompt performance of tracheotomy, soon caused death. On *post mortem* examination, no indications of any marked compression of the trachea could be found.

It is difficult, Dr. Wörner states, to give a satisfactory explanation of the asphyxia in these cases. Chloroform had not been given. There was no reason to suspect embolism, nor was there any degenerative softening of the cartilaginous rings of the trachea. There can be no doubt that the obstruction occurred in the larynx, and was due to bilateral palsy of the vocal cords and consequent closing of the glottis. In both cases, there was unilateral paralysis of the recurrent nerve at the time of the operation; and it is supposed that by the action of the injected iodine the opposite nerve was also affected, and complete paralysis thus produced, although it is left undetermined whether this paralysis was caused by the direct action of the injection on the previously sound nerve or by reflex action of the vagus. According to Dr. George Johnson, pressure on the trunk of the vagus, by influencing the nerve-centre, may cause bilateral paralysis of the larynx, whilst pressure on one recurrent causes only unilateral paralysis; and Seitz has thus explained cases of sudden death after injection of iodine for goître, that have been recorded by Sommerbrodt and others.

In conclusion, Dr. Wörner asserts that the treatment by puncture and injection of iodine is indicated in every case of cystic goître in which the cyst is simple and unilocular, and the walls of which are not thickened by inflammatory or calcareous deposit; on the other hand, it should not be applied in cases in which there are indications of the innervation of the larynx having been impaired, as it is then likely to result in serious and even fatal dyspnœa. W. JOHNSON SMITH.

ARTICLE 3651.

BEANEY ON ANEURYSM OF THE INNOMINATE ARTERY AND ON ANEURYSM OF THE FEMORAL ARTERY.*

DR. BEANEY'S lecture on innominate aneurysm relates to two cases, both treated by consecutive distal deligation of the carotid and afterwards the third part of the subclavian artery. Both are reported as 'recovered.' The cases are of much interest, and, as they belong to a class which is not by any means a large one, and illustrate a point of surgical practice that is still unsettled, their publication is certainly justified. Dr. Beaney has chosen to publish these cases in a magnificent quarto pamphlet, in which 'a rivulet of text meanders through a meadow of margin,' and which is decorated with all the author's titles and dignities in formidable array. In England, the publication would have been by the less ostentatious method of a paper and discussion at one of our surgical societies—possibly there is no such opportunity at Melbourne. At any rate, a notice in such a journal as this will serve the useful purpose of preserving the cases for future reference and classification.

Cases of this sort fall naturally under three heads—1, the diagnosis; 2, the treatment; and, 3, the result.

1. With reference to the first point, Dr. Beaney correctly says that 'we all know how extremely difficult it is to diagnose accurately an innominatal from an aortic aneurism,' and he also points out that in both these cases some of the consultants thought the aneurysm aortic. It is, of course, impossible to pronounce any confident opinion on such cases as these from written reports only; but the present writer must confess that in both cases the displacement of the heart downwards lends much probability to the view of aortic aneurysm, while the symptoms on which Dr. Beaney relies in the first case, as distinguishing the tumour from an aortic aneurysm (viz., displacement of the larynx and trachea to the left, pressure on the right subclavian artery by the tumour, the effect of simultaneous compression of the right carotid and subclavian, in diminishing the pulsation and bruit, and pain limited to the right side of the neck) do not appear inconsistent with aortic aneurism. Curiously enough, while Dr. Beaney enumerates pressure on the right subclavian as one of his proofs of innominate aneurysm in the first case, there was pressure on the left subclavian in the second, which is equally classed as innominate. The differential diagnosis is, however, a matter of less importance, now that it has been clearly proved that aortic aneurysms are often much benefited ('cured' as the event is commonly reported) by the distal ligature.

2. The second point is of far greater interest. Both Dr. Beaney's cases were treated (after some trial of medical means) by ligature of the right carotid, followed after an interval of thirty days in the first case, and twenty-four days in the second, by ligature of the third part of the subclavian. In the first case, the ligature of the carotid produced some consolidation and diminution of the area of pulsation; but this improvement had become stationary, or the pulsation was perhaps somewhat increasing, when the second artery was tied. After this second operation, the tincture of veratrum viride was given 'to such an extent as to keep him almost in a state of perpetual syncope,' and cold was applied to the tumour by means of the ether-spray. Finally, the tumour diminished to a small hard lump, of the size of a walnut, with no bruit but a small faintly pulsating area. In the second case also, the carotid operation produced some diminution of the swelling. The reasons for tying the subclavian are not distinctly stated; probably the operator was influenced by the success of the former case. The tumour went on consolidating rapidly after the second operation, and when the patient was last seen, three months after the ligature of the subclavian, 'the tumour was found to have become so small as not to be seen or felt above the clavicle. He is practising his profession again (that of a veterinary surgeon), can eat and sleep well, has gained flesh, and is in excellent spirits. No morbid sounds are audible within the chest.' These cases, then, certainly support the view of those who hold that the double distal ligature is necessary for the cure (or effectual relief) of innominate or aorto-innominate aneurysms (so to designate cases in which the diagnosis is uncertain or both arteries are affected); and an even more powerful argument is found in the fact that no successful case has been published, in which the ligature of the carotid alone has proved permanently beneficial (with the doubtful exception of one under Mr. Annandale's care*) since the old cases of Evans and Wright.† But this fact may possibly depend on the greater vogue which the double distal operation has acquired, and on the readiness with which surgeons now resort to the ligature of the subclavian artery in cases which possibly might have recovered, though slowly, under the ligature of the carotid only. Dr. Beaney's second case may possibly be an example of this. The notes show that the tumour was diminishing

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* Clinical Lectures on Aneurysm of the Innominate Artery and on a Case of Aneurysm of the Femoral Artery. Delivered at the Melbourne Hospital, Victoria, Australia, by J. G. Beaney, M.D., &c.

* *Brit. Med. Jour.*, Oct. 30, 1875.

† See *System of Surgery*, by Holmes and Hulke, third edition, vol. iii., pp. 119-122. As to Annandale's case, see Barwell in *International Encyclopædia of Surgery*, vol. iii. p. 530.

and was becoming firmer, when the operator decided to tie the subclavian, for some reason which might be perfectly sufficient, but which is not clearly stated. Nothing in the report of the case is inconsistent with the conjecture that the improvement which had confessedly followed the carotid operation might have gone on, and might have produced a practical cure without any interference with the subclavian artery. This is, no doubt, merely a conjecture: but the question is an important one, and is worth the serious consideration of practical surgeons. The simultaneous ligature of two such arteries as the carotid and subclavian is a very formidable undertaking; and of the two parts of which it consists, the operation on the subclavian is anatomically the more difficult. Every one who has had any experience in these matters must have seen cases in which great embarrassment has occurred in the ligature of this artery, and prolonged dissection was necessary. The only reason that has ever been advanced for performing the two ligatures simultaneously (in ordinary cases where compression of the subclavian gives negative results) is that there may be some inconvenience in administering an anæsthetic twice, and some additional mental disturbance in submitting to two operations.[*] But surely this is somewhat fanciful. We are all familiar with cases in which not two only, but many administrations of anæsthetics are required; and the experience of the consecutive double distal deligation proves that there is no inconvenience in thus dividing the treatment into two stages, even if we were quite sure that the second stage would be called for, which is far from being the case. Unless, therefore, it were clearly shown, not only that it is necessary to secure both vessels, but also that there is unquestionable advantage in securing them both at once, it seems only a dictate of common prudence to allow an interval between two such formidable operations. Now there is at present no evidence which can be called absolutely satisfactory to show that it is necessary to tie the subclavian in all cases. In fact, if there were no other successful case on record except Evans's, that case would of itself suffice to show that the ligature of the right carotid only may suffice—for 'the man was restored to complete health, and lived to an age beyond the ordinary term of existence, an active and, indeed, an imprudent life.' This case, then, in which only the carotid was tied, is the most successful instance of the distal ligature on record. And the analogy of the distal ligature of the left carotid goes to the same effect. Of the small number of cases of this operation hitherto practised, two at any rate, Heath's, which survived four and a half years, and Holmes's, still alive and well nine years after operation,[†] are among the most satisfactory of all the recorded cases. Now the relations of the left subclavian to an aortic aneurysm are as direct as those of the right subclavian to an innominate (much more an aortic) aneurysm. Hence, if it be not necessary to tie the left subclavian in an aneurysm of the left portion of the arch,[‡] why should it be imperative to tie the right subclavian in aorto-innominate aneurysm? And if it were, why should both arteries be tied at once? There are, including these two cases of Dr. Beaney's, either nine or ten cases of consecutive double distal ligature on record. Four of these, viz., Fearn's, Adams and Treves's, and these two of Dr. Beaney's, seem to have been cured, and to these a fifth—A. B. Mott's—is added by some writers.[*] Surely this is, in proportion to the small number of cases, a more satisfactory record than the simultaneous operation can show. For all these reasons, the present writer would urge a more deliberate trial of the carotid ligature in aorto-innominate aneurysms, to be supplemented by ligature of the third part of the subclavian if it seem afterwards necessary, and only upon definite indications, such as the general growth of the tumour or its extension on the side of the subclavian artery.

Another interesting question connected with these cases of double distal ligature is how the operation acts in producing a cure, or what is called a cure. The present writer, reasoning on the analogy of cases of 'practical cure' by impaction of clot—such as the case described by Dr. Ogle in the *Pathological Transactions*, vol. ix.—and on the exact resemblance between such cases as these and Dr. Wright's case, in which a 'practical cure' was produced by the distal ligature of the carotid, or Dr. Evans's, where the cure was ushered in by symptoms of impaction of clot in the subclavian, has argued that the cure is produced, at any rate in many cases, by the extension of clot from the tied carotid into the aneurismal pouch, which in successful cases goes on until the whole of the sac is filled up except a channel for the stream into the subclavian artery; and the explanation is so natural that it seems difficult to question its truth—at any rate in some cases. It is quite possible, however, that in other cases the coagulation may begin, not in the tied artery, but in the sac. That is to say, the stream being barred in the carotid, that part of the sac through which the blood used to pass into that artery—'the carotid portion' of the sac, so to call it—becomes relieved of the stress of the circulation, and coagulation commences in the blood which it contains. Both these anatomical explanations depend on the fact that the carotid artery has no branches, and therefore its cavity may be regarded as in some sense a portion of the aneurismal sac both before and after ligature. But this explanation does not apply to the subclavian. Ligature of the third part of this artery will only obliterate a small portion of it, leaving the first part patulous and its large branches enlarging to carry on the anastomotic circulation.[†] Consequently, the ligature of this artery can neither give rise to coagulation extending from the seat of ligature into the sac, nor stop the current through the subclavian part of the aneurysm. It may, however, possibly retard that current sufficiently to allow coagulation to extend from the carotid part of the tumour, until it lines the whole of the sac, and so to effect a 'practical cure;' and in this way only, as far as present evidence goes, can the undeniably beneficial effects of the subclavian ligature be explained.

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[*] This was Mr. Barwell's argument in the late debate at the Royal Medical and Chirurgical Society.

[†] *System of Surgery, supr. cit.*, p. 120.

[‡] Mr. Barwell seems to have performed the double ligature on the left side of the neck also. See case of J. K., mentioned in *Med. Chir. Trans.*, vol. lxiv. p. 226.

[*] *E.g.* Barwell, *op. cit.* p. 530. Mr. Barwell has in his table stated both the date and the cause of death erroneously in Adams and Treves's case.

[†] The writer is, of course, aware that Mr. Barwell believes that in one of his cases the whole subclavian artery was obliterated down to the aneurysm; but the *post mortem* examination in that case was hasty, and there was probably some mistake on this point, or possibly the mouth of the subclavian artery might have been obstructed by clot carried in from the aneurysm. At any rate, in all other cases where the subclavian has been dissected after ligature of its third portion, its first part has been patent. In fact, it is hard to see how the circulation could be carried on otherwise.

By 'practical cure' is meant the condition in which the sac is obliterated by coagulum in all its parts except the channel which is required for the circulation to go on through it. No better illustration of it can be given than the preparation (now in St. George's Hospital Museum) from the case above referred to, as described by Dr. Ogle, and here there was the plainest clinical and anatomical proof that it was brought about by the impaction of clot in the carotid. Many specimens, after distal ligature, have presented exactly the same condition—*e.g.*, Wright's, Fearn's, Adams and Treves's. This is the only cure which an aorto-innominate aneurysm admits, since life could hardly be carried on if both the right subclavian and carotid were obstructed at once, which would, of course, be the effect of the entire consolidation of the aneurysm. As, therefore, the process of cure in these thoracic aneurysms is less understood, and the cure itself not so complete as in external aneurysm, it behoves the surgeon to be cautious in exposing his patient to such very formidable dangers as are involved in the experimental ligature of large vessels.

The information at our disposal is not as yet sufficient to enable us to pronounce any opinion as to the permanence of recovery in these cases. Evans's patient had certainly no relapse, and survived the operation more than thirty years. The young woman, under the present writer's care, who recovered after ligature of the left carotid, is still alive and well nine years after operation, but is believed to have still obvious signs of aneurism; certainly she had such when last seen. Mr. Heath's similar case died four and a half years after operation, from bursting of the aneurism. Wright's, Fearn's, and Adams and Treves's died from other causes, at too early a period to allow a judgment as to the permanence of the cure. All the other cases (including, we believe, all those hitherto published by Mr. Barwell), though in some the benefit of the operation has been most striking, and has amply justified the course pursued, have died in too short a time to be accepted as cured.[*] The nearest approach to a cure is seen, perhaps, in the case of R. W., reported by Mr. Barwell in the *Medico-Chirurgical Transactions*, vol. lxi., and in his work on *Aneurism*, where the preparation of the aneurism after death is engraved and fully described; but here again death occurred at too early a period to enable us to judge of the permanence of the recovery. Almost exactly the same statement applies to Mr. Barwell's subsequent case of Laura G. (*Medico-Chirurgical Transactions*, vol. lxii., on *Aneurism*, p. 106). In many of the cases recorded by other surgeons in which 'recovery' or 'cure' is claimed, all that can be said is that the patient recovered from the operation. There is no proof whatever of the cure of the disease.

Another interesting and unsettled question which is illustrated by Dr. Beaney's cases is the kind of ligature employed. Mr. Barwell has dwelt on the supposed advantages of not dividing the coats of the artery, and has introduced a kind of ligature made from the middle coat of the aorta of an ox, which is flat, and which is intended to command the artery and keep it closed without dividing the internal and middle coats. Other surgeons are sceptical as to the advantages of leaving these coats entire, supposing it to be possible. Doubts, of course, exist on the latter head. Mr. Barwell's ligature is, no doubt, flat when laid on a table. But, when tied, it is hard to see how its sharp edges can be prevented from impinging on the vessel, and, if they do, they will probably cut the middle coat.[*]

But, leaving this consideration aside, is the injury done to the middle coat a drawback to the success of the operation? The cases reported by the present writer, by Mr. Treves, and by Mr. MacCarthy are here in point. In the writer's case,[†] eight weeks after ligature of the carotid and subclavian arteries, the vessels were found very imperfectly obliterated, and quite empty. In the carotid were two small holes, looking as if the middle coat had been cracked there, and as if a small pouch had formed at each of the cracks. No other trace existed of any damage having been done to the coats. The obstructing medium in both vessels seemed to have been a very thin diaphragm. The condition of the arteries in Mr. Treves' and in Mr. MacCarthy's cases [‡] was essentially similar, but in both cases the diaphragm had yielded and allowed the reproduction of the circulation through the tied artery. In all these cases the ligature was of catgut, and several other instances have been recorded in which the circulation has recurred after the use of this ligature. The fact has not hitherto been noticed when ox-aorta or tendon ligatures have been employed, but the number of cases is as yet limited, and that of dissections still more so. The sixty-fourth volume of the *Medico-Chirurgical Transactions* contains the description by Mr. Barwell of three dissections after the use of ox-aorta ligature sixteen months, nine months, and thirty hours before death, on both carotid and subclavian arteries, making six arteries in all; and in the same volume is the description by Mr. Dent of the subclavian and carotid arteries after ligature with kangaroo-tendons ten days before death. Of these, Mr. Barwell's recent case proves at any rate that the ox-aorta ligature may be so tied as not to divide the internal coats of the vessel; [§] and his more remote cases show that the same ligature may produce as permanent and complete obliteration of the vessel as any silk ligature; while Mr. Dent's paper shows that the tendon-ligature may at any rate produce division of the internal coats, and that it is capable of organisation, *i.e.* of being replaced or permeated by growing tissue. The tendon-ligature is the one which is now constantly used at St. George's Hospital; and it seems preferable to the ox-aorta, for the simple reason that it is a natural product, and therefore more smooth, rounded, and even than the ox-aorta ligature. But the latter is no doubt an excellent material. These large, strong, slowly absorbing bands, which as they disappear seem to leave a ring of organised tissue behind them, appear therefore to give much more security for the permanent modification of the channels of circulation, aimed at in the distal operation, than catgut does; while they give a protection against secondary hæmorrhage far more complete than is supplied by that material, and which, in fact, seems nearly perfect. In Dr. Beaney's two cases the ligatures were kangaroo-tendons.

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[*] The writer is rather uncertain what was the result in the case of Catharine H., recorded in the *Med.-Chir. Trans.*, vol. lxii., p. 224, but none of his cases referred to by Mr. Barwell in the *International Encyclopædia of Surgery*, vol. iii., p. 529, lived more than nineteen months.

[*] These observations are not made with any wish to depreciate the ox-aorta ligature. It seems much better than catgut for the ligature of a large artery in its continuity, and the writer used it very successfully in a case of ligature of the external iliac, reported in *St. George's Hospital Reports*, vol. x.

[†] *St. George's Hospital Reports*, vol. vi., p. 244.

[‡] *Proceedings of the Royal Medical and Chirurgical Society*, vol. ix., pp. 25 and 29.

[§] One of Mr. Barwell's cases (*Med.-Chir. Trans.*, vol. lxiv., p. 227) shows that in attempting to do this Mr. Barwell failed to close the artery at all, and this is another great objection to the proposal of tying arteries without dividing the internal coats.

3. With regard to the results of the surgical treatment of thoracic aneurysm by the distal ligature, it is most gratifying to note the very great success which has already been attained—a success which no doubt will become relatively greater with increased precision in diagnosis and improved methods of ligature. The statistics of all operations are in themselves very untrustworthy guides on questions of treatment, and those of this particular operation are perhaps more misleading (if used in the ordinary blind arithmetical fashion) than those of more common operations are, for the obvious reason that the success of the operation must depend mainly not on anything that can be expected to recur in certain numerical proportions, but on the acumen of the surgeon in diagnosing appropriate cases and applying to each the appropriate method. And, in this respect, there can be no question that Mr. Barwell has rendered greater services to surgery than any of his compeers. The interesting speculations as to the differential diagnosis of various forms of aortic aneurysm (contained in vol. lxii., p. 395, &c., of the *Medico-Chirurgical Transactions*) require, it is true, the verification of other observers. Still they are obviously a step in the right direction, and they seem to have led their author himself to sound conclusions, if we may judge by the splendid series of cases published in the *Transactions*, to which another was added at a recent meeting of the Society. The present writer has not hesitated to express his dissent from such of Mr. Barwell's doctrines as he deems questionable, and he is not disposed at present to admit any of Mr. Barwell's cases as genuine instances of definite 'cure'; but he willingly recognises the labours of Mr. Barwell in this difficult province of surgery as most successful, and as giving the example by which those of the future may be conducted to still greater success. The past experience of surgeons is, however, of considerable interest and value, if used not as 'statistics,' but by the intelligent study and comparison of individual cases, and thus attempting to define the symptoms which call for or justify operative procedure. One thing has been abundantly proved by the tolerably long series of operations now on record for thoracic aneurysms—that far more success has been attained by the distal ligature than by electrolysis, or by any other form of treatment. And good reason has also been shown for preferring the isolated ligature of the carotid artery as the first step in the treatment, unless there be some definite indication for tying the subclavian at the same time. Such indications would be either the manifest growth of the subclavian portion of the sac, or the effect of compression of the subclavian in diminishing the size or pulsation of the tumour. T. Holmes.

Article 3652.

NICKLES ON THE PHYSIOLOGICAL ACTION OF DIGITALIS.

In the October issue of the *American Journal of the Medical Sciences* Dr. Samuel Nickles, of Cincinnati, summarises the present state of our knowledge of the physiological action of digitalis; and his paper is specially instructive, since the doctrines now universally taught regarding the action and uses of digitalis differ in a number of important points from those held two decades ago. Then we were taught that digitalis is essentially a sedative affecting strongly the nervous system, thus causing feeble and slow action of the heart. Now the latest authors teach that the nervous system is only secondarily affected, while the heart is directly influenced, its action becoming more powerful though slower. Twenty years ago, we were taught that digitalis is diuretic, directly acting upon the kidneys, thus producing in many diseases a greater secretion of urine. To-day we are told that digitalis does not act upon the kidneys at all, and only secondarily affects the secretion of urine by causing a change in the systemic circulation. In one point there is universal agreement; that digitalis, recklessly used, may produce the most disastrous effects, and that these may occur quite unexpectedly in consequence of cumulative action.

But not only in regard to the *modus operandi* do present authors differ from their predecessors, but also as to the therapeutic indications. Two decades ago, digitalis was held to be indicated when the heart's action is too powerful; now we are informed that it is useful only when the heart's action is too feeble. Then authors taught that digitalis will control and hence favourably influence a hypertrophied heart, while present writers contend that every disease of the heart attended with excessive action is aggravated. It was held for a century that digitalis, though not eminently useful, is still often of great service in dropsy dependent on organic disease of the kidneys; but now we hear that, in disease of the kidneys attended with diminished diuresis, it is almost always useless, and always exceedingly dangerous.

Article 3653.

UNNA ON MEDICATED KAOLIN AND OTHER PASTES.*

Professor Unna, to avoid the greasiness and reduce the cost of ointments, has suggested the use of kaolin or porcelain clay as a basis. The paste should be quickly and easily spread in a thin layer on the skin, and should form in a short time a firmly adhering coating.

Pure kaolin, with vaseline or glycerine in equal parts, with oils—such as olive, almond, or linseed—in the proportion of two to one, will produce a good paste. With more linseed oil a liniment is produced. This, when spread on extensive surfaces, leaves a quickly-drying residuum. When other ingredients—such as lead acetate or zinc oxide—are used, the kaolin and oil or glycerine are to be mixed first, and the lead or zinc added, as the kaolin is otherwise apt to form an insoluble cement with the metallic salt. Yellow or red kaolin may be used in place of white; and these pastes may not only be used in the treatment of certain diseases of the skin, but also as vehicles for escharotic agents. The following formula is suggested.

Pure kaolin,
Linseed oil (or glycerine), of each 30 parts.
Oxide of zinc,
Solution of subacetate of lead, of each 20 parts.

—*Edinburgh Med. Jour.*, from *Monat. für Prak. Derm.*

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* From *Edinburgh Med. Jour.* Reprinted from the *American Druggist*, December 1884.

Professor Unna, in his experiments with kaolin pastes, found that other forms of paste might be used to advantage, as for example :—

Lead pastes.—Boil a quantity of litharge with double the quantity of vinegar, until the latter has evaporated and the litharge has become a moderately damp mass. Should the paste in time become dry it can be restored by heating it with more vinegar, or :—

Lithargyri subt. pulv.	50 parts
Aceti	80 „

Boil to the consistency of a paste and add—

Ol. lini (*vel* glycerini, *vel* ol. olivæ)	10 parts

Starch pastes.—Useful in eczema. In this case the property of drying must be imparted to the paste by the addition of oxide of zinc, sulphur, &c.

Zinci oxidi	50 parts
Acid. salicylici	2 „
Amyli oryzæ	15 „
Glycerini	15 „
Aq. destillat	75 „

Mix simultaneously, and heat until reduced to 140 parts.

A similar paste for acne consists of :

Sulphuris præcip.	40 parts.
Calcii carbonat.	2 „
Zinci oxidi	20 „
Amyli oryzæ	15 „
Glycerini	20 „
Aq. destillat.	75 „

M. Reduce by boiling to 120 parts.

Dextrin pastes.—(For eczema.)

Zinci oxidi	40 parts.
Dextrini (pulverised),	
Aq. destillat. āā	20 „
Glycerini	40 „
Sulphuris sublim.	2 „

M. Boil to a paste.

For freckles :—

Zinci oxidi	10 parts.
Bismuthi oxychloridi	2 „
Hydrarg. perchloridi	·02–0·5 „
Dextrini,	
Aq. destill. āā	10 „
Glycerini	15 „

M. Boil to a paste. If it becomes hard, a few drops of water will enable it to be spread.

Gum pastes (for chronic infantile eczema).

Zinci oxidi	40 parts.
Hydr. oxidi rubri	2 „
Mucilag. acaciæ,	
Glycerini āā	20 „

M. secundum artem.

Cretæ præparat.,	
Sulphuris sublim. āā	2 parts.
Picis liquidæ	8 „
Amyli	20 „
Mucilag. acaciæ,	
Glycerini āā	15 „

M.

For scabies :—

Zinci oxidi	40 parts.
Bals. Peruv.	20 „
Mucilag. acaciæ,	
Glycerini āā	30 „

M.

For sore nipples :—

Sacchari albi,	
Zinci oxidi,	
Mucilag. acaciæ,	
Glycerini āā	5 parts. M.

The gum pastes will serve also as vehicles for chrysarobin and pyrogallic acid and oily substances, but cannot be employed for acids, since these destroy their adhesiveness. Kaolin paste can also be used for chrysarobin and pyrogallic acids.

Attempts to form pastes which can be kept in bulk ready prepared have thus far been unsuccessful. Even oil or glycerin fails to prevent their hardening in time, and as the best pastes are those which dry the most rapidly when applied to the skin, these are the ones which are soonest spoiled by keeping. Corrosive sublimate, calomel, red and white precipitate, naphthol, carbolic acid, chloral hydrate, and camphor may be combined with any of the above formulas. Salicylic acid mixes well with all the pastes, excepting in large proportions with gum paste. Iodine and iodoform are compatible with the lead, kaolin, and gum pastes, but not with the others. Animal, vegetable, and mineral fats and soaps can be mixed in small quantities with all the pastes.

Article 3654.

AN ENGLISH HYDRO-THERAPEUTIC RESORT.

That water in its various forms and applications is one of the most powerful therapeutic agents at our command will be at once admitted by all who have had opportunities of carefully studying its effects. A few years ago the subject was hardly mentioned in our leading works on therapeutics, and by common consent the discussion of the virtues and mode of action of the different forms of baths was relegated to special works on the subject. A change has, however, recently taken place in the general estimation of this mode of treatment, and it is now universally acknowledged that we have, in the various applications of water, a powerful means of curing, or at all events arresting, a large number of chronic complaints. It is a common practice to order a course of baths as an adjunct to purely medicinal treatment. That this custom is not still more largely adopted is due undoubtedly to the fact that there are so few facilities for obtaining the requisite accommodation. Many large towns in England are unprovided with baths except of the most primitive description, and even in London the difficulties experienced by patients in carrying out the directions of their medical advisers are very great. That the various hydropathic establishments scattered throughout the country have done much to fill this void will be readily conceded, but at the same time the fact cannot be disguised that many people have a disinclination—a very natural disinclination—to submit to the somewhat vexatious restrictions often imposed by their proprietors. To meet this difficulty, and with the view of supplying a long-felt want, a scheme is on foot for establishing a high class health-resort within easy reach of London, where medical men could send their patients with the full assurance that they would at once obtain those hydro-therapeutic applications which have hitherto been denied them. Fifty acres of beautiful park land have been purchased near Hastings, and on this it is proposed to erect 'The St. Helen's Park Mansion,' to be opened as a health and recreative resort. A company is now being formed to carry out this scheme, and, with the powerful support it is receiving, will no doubt prove a most remunerative commercial undertaking. The fact that the scheme is under the special patronage of Sir Thomas Brassey, who is taking an active interest in the work, is in itself a sufficient guarantee that it is deserving of support. The baths will comprise all those recognised either in England or on the Continent, and will be on a scale as yet unknown in this country. The water, obtained from artesian wells, is of excellent quality, and the soil is a light sandy loam. Accommodation will be provided for 150 visitors—including private rooms and suites of apartments—and musical and other entertainments will be given on a large scale. There can be no doubt that a scheme of this description, properly carried out, will meet with an amount of support which has hitherto been accorded only to Continental health-resorts. The matter is being taken up very warmly by the authorities of the town of Hastings, and the directors of the South-Eastern Railway have offered to attach to one of their express trains a saloon carriage for the exclusive use of visitors to St. Helen's Park. The offices of the company are at 5 Fenchurch Street, E.C., the secretary being Mr. Alfred Beavis, from whom further information may be obtained.

PHARMACOLOGY.[*]

Article 3655.

The *New York Medical Record* contains a reclamation from Dr. S. R. Percy in respect to priority in the discovery of the alkaloid of cuca leaves. Dr. Percy states that, in Nov. 1857, or between two and three years before the publication of Niemann's paper, he read before the New York Academy of Medicine a paper on the leaf of the plant *Erythroxylon Coca*, in which he reported that he was engaged in the chemical investigation of the leaf; also, that in the following month he read another communication and exhibited before the same Society a scruple of an alkaloid producing a paralysing and benumbing sensation on the tongue, which he had obtained and named 'erythroxyline.' He therefore claims to be credited as the discoverer of the alkaloid of coca leaves, and that it should be designated by the name originally given to it by him. As these papers appear never to have been printed, it cannot be ascertained how far they cover the ground of Niemann's exhaustive investigation of the subject published in 1860. But, so far as the isolation of a basic substance is concerned, it may be mentioned that as early as 1855 Dr. F. Gaedeke, a German chemist, succeeded in obtaining a crystalline alkaloid from the leaves, and, not being able to satisfy himself of its identity with theine, he provisionally named it 'erytbroxyline.' The paper in which he described his work was published in the *Archiv der Pharmacie* (vol. cxxxii., 141). Some objection has been raised to the name 'cocaine,' as being conducive to confusion, and its modification to 'cucaine' has been suggested. As, however, 'erythroxyline' would appear to have been chosen by two of the earliest observers of the alkaloid, it would seem preferable, if a change be desirable, to adopt at least that part of Dr. Percy's case which advocates a reversion to this more distinctive designation.

Mr. E. Caudwell, of Westminster Hospital, has boldly experimented on himself with large doses of cucaine (*Brit. Med. Jour*, Jan. 3, p. 17), having increased the dose of the valoid (a fluid extract equivalent to its weight of the leaves) from 2 drachms to 2 ounces. The last-named dose caused giddiness and unsteadiness of gait for ten minutes, and then a general sensation of well-being, with considerable mental excitement and ability to read steadily for many hours and to keep awake all night. With hydrochlorate of cucaine (Merck's) he commenced by taking half a grain, and increased the dose to 5 grains, which caused toxic symptoms; these, however, passed off in about two hours, except the dilatation of the pupils of the eyes, which lasted for six hours. From his experiments he concludes that cuca and cucaine exert a double action, being cerebral sedatives in small doses and cerebral stimulants in large doses; that cucaine given internally dilates the pupils, and that it possesses no toxic action except in large doses. To the pharmacist, these experiments will be valuable as giving some idea of what may be considered a dangerous dose of the salts of this alkaloid.

Attention is directed in the *Pharmaceutische Post* (Jan. 17, p. 78) to the antagonism between cucaine and morphine, and to the value of cucaine for allaying the craving for morphia in the habitual consumer of opium or morphia. It is suggested that the different results that have been obtained in the use of cucaine for this purpose may be due to the differences in the alkaloid employed, since it has been observed that the alkaloid of one manufacturer, which was of good colour and appearance, produced nausea, while a darker and more granular alkaloid did not do so. The last-named is scarcely aromatic at all, and a 5 per cent. solution is absolutely clear, while the former is strongly aromatic, and a solution of the same strength is not quite transparent.

In the *American Journal of Pharmacy* (p. 21), Messrs. H. Trimble and H. J. Shuckard, give the results of a chemical examination of *Polygonum Hydropiper*. They have prepared the polygonic acid of Dr. C. J. Rademaker (*Amer. Journ. Pharm.*, Nov. 1879), and conclude that it is only a mixture of impure tannic and gallic acids. The peculiar pungent principle, although present in a weak alcoholic tincture, disappeared on distillation, the pungent taste of the herb being absent both from the distillate and the residue in the retort. It appears probable, therefore, that it is easily decomposed on heating. A cold preparation of the plant is consequently the only one suitable for use in medicine.

Professor Trimble has also examined burdock seed and oil, and has obtained indications of an alkaloid in the former, which is being further examined.

In the same journal, Dr. J. D. Palmer calls attention to a fact which is not so well known as it should be, viz., that ordinary nutmegs are poisonous in large doses. In a case which came under his notice a lady ate a nutmeg and a half, which caused extreme drowsiness, then great nervous excitement, followed by subsequent depression, and pain in the region of the heart. The remedy used as palliative was bromide of potassium. These effects point to the existence of an active principle, which may be worth investigation both from a chemical and a therapeutical point of view.

According to a statement recently published in the *American Druggist*, January, p. 6, the alvelos plant is *Euphorbia heterodoxa*, Müll. Arg. It is described in Martius' *Flora Brasiliensis* as growing at Yoazeiro, near Bahia. The description given by Mueller does not correspond exactly with the characters of the alvelos plant received by Messrs. T.

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[*] From the *Pharmaceutical Journal.*

Christy & Co. from Brazil. The juice is preserved from decomposition by the addition of salicylic acid, which, by reason of its special action on the skin, may also possibly be an advantageous addition from a therapeutical point of view. A resin, which is believed to possess the active properties of the plant, has been prepared from the juice, and is used in the proportion of one, two or three parts to one of vaseline.

Fresh researches on the doundaké plant (*Comtes Rendus*, tome c.) indicate that it is identical with the root sometimes exported from West Africa under the name of 'peach root,' and obtained from *Sarcocephalus esculentus*, Afz. (*Cephalina esculenta*, Schum.). Messrs. Hæckell & Schlagdenhauffen consider it as an astringent and febrifuge, capable of replacing cinchona bark. They also regard the beautiful yellow colour as worthy of the attention of dyers. Like cinchona, the plant belongs to the natural order Cinchonaceæ. According to these authors the doundaké extends from 16° N. latitude to 5° S. latitude, from Senegambia to the Gaboon, and is known in the Sousou tongue as 'doundaké,' in the Toucouleur as 'jadali,' in the Bassa country as 'dorg,' and in Sierra Leone as 'amelliky.' The same authors state that with doundaké bark those of certain species of *Morinda* are sometimes accidentally mixed—viz., *Morinda citrifolia*, L., *M. longiflora*, G. Don., and a third which has been named *M. Doundaké*, Hechel, although Professor Oliver considers it to be a simple variety of *M. longiflora* (*Flor. Trop. Africa*, iii., p. 193). The authors describe two varieties of doundaké bark, the one from Sierra Leone and the other from Boké (Rio Nunez). The young bark of the first has a greyish, smooth, surface, here and there cracked, and presenting small hard distant excrescences of a darker colour. When older the bark becomes blackish, the cracks multiply, and the epidermis falls off as a reddish dust. The interior of the bark is of an ochrey yellow, and is striated longitudinally. The liber fibres separate easily in lamellæ. The bark has a bitter taste and tinges the saliva yellow. The epidermis and corky layer are astringent only. The Boké bark differs in the absence of the blackish excrescences, and the internal surface is of a darker yellow. The epidermal layer is less astringent, and the liber more bitter, but the anatomical structure is identical. The authors have not been able to obtain the alkaloidal principle indicated by MM. Bochefontaine, Féris, and Marcus. They have found that the bitterness of the bark of *Sarcocephalus esculentus* is due to two nitrogenous colouring principles of a resinoid character, differing in their solubility in alcohol and water, and having the formulæ $C_{28}H_{19}NO_{13}$ and $C_{19}H_{16}NO_{9}$. The other constituents found in the bark are a tasteless principle, soluble in caustic potash, glucose and traces of tannin. The morindas yield a bitter and astringent bark.

In a contribution to the pharmacological history of *Conium maculatum* (*Jour. Ph. Chim.* [5], tome vi.), M. Lepage gives the results of some experiments which confirm the conclusion arrived at by Orfila that the root of this plant contains only a small quantity of alkaloids. In these experiments a series of alcoholic extracts of fresh and dried roots was examined, and distillates from dry roots were treated directly for the alkaloids. M. Lepage found that roots collected in March from only partially developed plants contained extremely small quantities of alkaloids. The same result was obtained with roots collected in May, although the plants were then in full growth and the leaves and stalks contained a notable quantity of alkaloid. Roots collected towards the end of June gave no better yield, but the roots of first year's plants collected in September were found always richer in alkaloid than those of the second year. The largest quantity of conicine was met with in the fruit. No alkaloid was found in an oil obtained by boiling the roots previously reduced to pulp, but oil derived from the leaves, stalks, or fruits contained a considerable quantity.

As a result of some experiments with different pharmaceutical preparations, M. Limousin expresses a preference for a tincture prepared according to the Codex formula for tinctures as compared with the United States liquid extract.

The peculiar and somewhat disagreeable odour of naphthaline may be overcome, or rather altered, by the trituration with it of a small quantity of oil of bergamot. The two odours are said to blend together, so as to develop a new and characteristic scent, which is quite agreeable. (*American Druggist*, January, p. 17.) This is easily understood when it is taken into consideration how closely the fragrant odour of liquid storax approaches to that of gas-tar.

The fourth number of Messrs. Lloyd's *Drugs and Medicines of North America*, issued last month, is devoted entirely to *Hydrastis Canadensis*, and forms the most elaborate and exhaustive treatise on the plant yet published. Representations are given of the microscopical appearance of the crystallised alkaloids of the root, viz. berberine and hydrastine, and of mono- and di-berberine sulphates, as well as of the phosphate and citrate. Xanthopuccin, or 'Hale's third alkaloid,' is considered by the author to be impure berberine, and certainly the crystals of the sulphate, as illustrated in this work, bear a strong resemblance to those of monoberberine sulphate. A considerable amount of valuable practical information concerning the manufacture of the alkaloids is also interspersed throughout the article. This publication promises to be the most valuable contribution to materia medica that has appeared in American literature, and, if continued on the same lines, will undoubtedly be the standard work of reference in that country.

SURGERY.

RECENT PAPERS.

3656. EAST.—The Treatment of Phimosis. (*Brit. Med. Jour.*, Dec., p. 1239.)

3657. BOND.—The Treatment of Burns by Boracic Acid. (*Brit. Med. Jour.*, Dec., p. 1239.)

3658. ROSE.—A Case of Gunshot Injury of the Brain. (*Brit. Med. Jour.*, Dec., p. 1245.)

3659. DALY.—A Case of Extensive Burn of the Knee-joint. (*Brit. Med. Jour.*, Dec., p. 1186.)

3660. BENTON.—The Treatment of Hæmorrhage after Rectal Operations. (*Brit. Med. Jour.*, Dec., p. 1188.)

3661. KESTEVEN.—Antiseptic Steam-irrigation of Foul Wounds. (*Lancet*, Dec., p. 997.)

3662. M'GILL.—Two Cases of Charbon. (*Lancet*, Dec., p. 994.)

3663. FLUHRER.—Counter-opening and Drainage in Bullet-wounds of the Head. (*Boston Med. and Surgical Jour.*, May 29.)

3664. TREVES.—The Treatment of Perforating Ulcer of the Foot. (*Lancet*, Nov., p. 949.)

3665. BRYANT.—The Mode of Death from Acute

Intestinal Strangulation and Chronic Intestinal Obstruction. (*Brit. Med. Jour.*, Nov., p. 1001 and 1057; and Dec., p. 1111.)

3666. Mikulicz.—Laparotomy for Perforation of the Stomach and Intestine. (*Centralbl. für Chir.*, No. 95, 1884.)

3667. Zesas.—The Treatment of Paraplegia in Caries of the Spine. (*Archiv für Klin. Chir.*, Band xxxi.)

3668. Von Bergmann.—Extirpation of the Kidney. (*Centralbl. für Chir.*, No. 45, 1884.)

3669. Morris, H.—On the Surgical Treatment of Calculus Impacted in the Ureter. (*Amer. Jour. of Med. Sciences*, Oct. 1884.)

3670. Mannheim and Bessel-Hagen.—Suprapubic Lithotomy. (*Centralbl. für Chir.*, No. 45, 1884.)

3671. Ogston.—Trephining the Frontal Sinuses for Catarrhal Diseases. (*Med. Chronicle*, Dec. 1884.)

3672. Jacquemart. — Vesical Disturbances in the Early Stages of Locomotor Ataxy. (*Jour. de Méd. de Bruxelles*, No. 11, 1884.)

3673. Gluck.—Repair of Destroyed Tendons. (*Berlin Medical Society.*)

3674. Ebner. — Some Rare Cases of Dislocation. (*Allgem. Wiener Med. Zeitung*, Nov. 25 and Dec. 9.)

3675. Kussmaul.—The Treatment of Intestinal Invagination by Washing out the Stomach. (*Centralbl. für die Gesammte Therapie*, December.)

3676. Rosanoff, P. G.—A Case of Hydrocele radically cured by Pressure. (*Meditz. Obozrenie*, No. 21, 1884, pp. 808–9.)

3677. Radulovitch, V.—On Lithotrity in One Sitting in Adult Women. (*Vratch*, 1883, No. 48, pp. 760–1; No. 50, pp. 788–9, and No. 51, pp. 805–7.)

3678. Werth.—On the Influence of Operations, especially Laparotomy, on the Temperature of the Body. (*Archiv für Gynäkologie*, Vol. xxiii., Part 3.)

Art. 3656. *East on the Treatment of Phimosis.*—Mr. East, in the *Brit. Med. Jour.*, Dec. 1884, p. 1239, gives a practical hint with regard to the treatment of phimosis. It is to use thin strips of gentian-root as wedges, inserting six or eight between the glans and prepuce.

3657. *Bond on the Treatment of Burns by Boracic Acid Oil.*—In the *Brit. Med. Jour.*, Dec. 1884, p. 1239, Mr. C. J. Bond writes that he has found that eighteen grains of powdered boracic acid, dissolved in a drachm of hot glycerine, and added to an ounce of olive oil, forms a splendid non-irritating and antiseptic dressing for extensive burns. This boracic oil forms an excellent lubricant for catheters, sounds, &c., and causes no irritation.

3658. *Rose on a Case of Gunshot Injury of the Brain.*—In the *Brit. Med. Jour.*, Dec. 1884, p. 1245, a case is recorded in which Mr. William Rose removed a bullet from the brain of a man, aged 45, who had inflicted a suicidal wound with a revolver held against the palate behind the incisor teeth. The bullet appeared to have passed through the base of the skull, and into the right hemisphere of the brain. The patient lived four days after the injury. He was sometimes violent and apathetic, but at length became comatose and died, though he was conscious for the greater part of three days after the injury. There was neither spasm nor paralysis at any time. The *post mortem* examination showed that the bullet traversed the ethmoid plate, and pierced the right frontal bone close to the middle line, one inch in front of the coronal suture. The left orbital convolution was lacerated at a point corresponding to the ethmoid, and there was a deep laceration of the corresponding parts of the right orbital convolutions. The further course of the bullet was limited to the right hemisphere; in front of a vertical line, carried through the anterior border of the head of the convolution of the corpus callosum, the marginal convolution was completely destroyed; the first frontal convolution in front of the same line was also destroyed for part of its breadth. The interest of the case lay in the absence of symptoms in the early stage of the case, and the complete accordance of the results of the lesions with the teachings of cortical localisation.

3659. *Daly on a Case of Extensive Burn of the Knee-joint.*—In the *Brit. Med. Jour.*, Dec. 1884, p. 1186, Dr. W. Daly, of Pittsburg, gives the note of a case in which conservative surgery was practised with considerable success. A powerfully built man, aged 41, was driving an engine at a high speed, when it was precipitated over an embankment, and he was buried beneath the fire-box of the engine for some hours. On being taken out, it was found that the left leg had sustained severe damage from the long-continued roasting it had received whilst under the fire-box. All the anterior and lateral surface of the left leg, about and below the knee, was a mass of charred tissue; the tibia and fibula were laid bare, the patella was completely detached, and the knee-joint was laid open. The patient refused to have any operation performed; the leg was therefore placed in a fracture-box and the wound dressed with carbolised oil. The dressings were frequently changed, and good diet was given. Some pieces of dead bone were removed with a sharp chisel; and ten months after the accident the wound had nearly healed, and in a few weeks the patient was walking about with a most useful limb.

3660. *Benton on the Treatment of Hæmorrhage after Rectal Operations.*—In the *Brit. Med. Jour.*, Dec. 1884, p. 1188, Mr. S. Benton describes a little instrument, which has been made at his suggestion by Messrs. Wright & Co., of Bond Street, for the treatment of hæmorrhage after rectal operations. It is merely a soft piece of French catheter-tubing surrounded by a dilatable air-bag. The air-bag is made of very thin rubber, constricted below the middle, so that too much pressure should not be brought to bear upon the sphincter ani.

3661. *Kesteven on Antiseptic Steam-irrigation of Foul Wounds.*—Mr. Leighton Kesteven, in the *Lancet*, Dec. 1884, p. 997, brings before the profession a new *modus operandi* of a remedy now possessed by nearly every medical man. The method is as follows. A steam-spray is charged with a solution of eucalyptus oil, and is brought to play at a close distance directly on the wound for long-continued periods. The advantages claimed for this very simple modification of an acknowledged plan of treatment are: 1. mechanical, but gentle and efficient, cleansing of foul wounds; 2. ease of pain; 3. obviation, to a large extent, of the disagreeables of dressing, especially in household cases; 4. perfect deodorisation; 5. undoubted acceleration of the reparative process; 6. the most important result of antiseptic dressing, destruction of germs, being more thoroughly effected by greater permeation.

3662. *M'Gill on Two Cases of Charbon.*—In the *Lancet*, Dec. 1884, p. 994, Mr. A. F. M'Gill records two cases of charbon. The first occurred in a butcher, aged 64. He was, on July 23, skinning a beast known to be diseased, and, whilst examining the viscera, knocked a small piece of skin off the lower part of his right forearm. Two days afterwards he was admitted into the Leeds Infirmary, and the case was looked upon as an ordinary one of diffuse cellulitis of the forearm. Numerous incisions were made into the swollen tissues, and a poultice applied. The patient, however, became very weak, and died four days after the inoculation of the wound. At the *post mortem* examination, the blood was found to contain large quantities of the bacillus anthracis with spores. The second case noted was that of a middle-aged man, who scratched his right arm whilst dressing a beast, which had been feeding in the same field as the animal that caused the death of the first case. On Aug. 2 the wound was inflicted, and on Aug. 6 a large malignant pustule was excised by Mr. M'Gill, and the wound was dressed with iodoform and lint. The patient made a good and speedy recovery. The excised pustule was placed in alcohol, and, when examined microscopically, was found to contain a large number of bacilli and spores. This case shows the advantage of early excision.

3663. *Fluhrer on Counter-opening and Drainage in Bullet-wound of the Head.*—In the *Boston Med. and Surg. Jour.*, May 29, 1884, the following case is noted. A man shot himself in the forehead, and was seized with hemiplegia and coma. Dr. Fluhrer probed the wound, and ascertained the direction of the ball. He then removed it by a counter-opening at the back of the head, and maintained drainage by passing a rubber tube through the entire wound. The paralysis gradually disappeared, and in three months' time the patient was restored to excellent health.

3664. *Treves on the Treatment of Perforating Ulcer of the Foot.*—Mr. F. Treves, in the *Lancet*, Nov. 1884, p. 949, contributes a valuable lecture on cases of perforating ulcer of the foot. These ulcers often appear in cases of locomotor ataxy, or in conditions known vaguely as sclerosis or tabes, and are the outcome of the action of certain purely local causes upon a part whose condition has been injuriously influenced by a central nerve disturbance. These ulcers, except when unusually severe, may be healed without other especial treatment than that of absolute rest. Some surgeons advise the amputation of the foot on account of the persistent nature of the ulceration, but the author draws attention to the following plan of treatment. The patient is confined to bed, and the sole of the foot is kept continuously poulticed with linseed meal for twenty-four hours. This softens the hard epidermis, so that it can be shaved down with a scalpel. The poultice is then reapplied for another twenty-four hours, and the scalpel is used day by day until the whole of the thickened epidermis is removed. The ulcer will by that time be cleaned, and ready for the application of the following paste. Mix some salicylic acid and glycerine to make a paste about the consistence of cream, to which is added some carbolic acid in the proportion of ten minims to the ounce. This paste is applied on lint, and is quite painless. The ulcer soon heals, and when the patient gets up he is instructed to wear constantly a thick pad of felt plaster over the spot, with a hole in its centre that corresponds to the scar of the recent sore. The author records notes of two cases in which he has followed this plan with marked success.

3665. *Bryant on the Mode of Death from Acute Intestinal Strangulation and Chronic Intestinal Obstruction.*—In the *Brit. Med. Jour.*, November 1884, pp. 1001, 1057, and December, p. 1111, are published the Harveian Lectures, delivered by Mr. Thomas Bryant, in which he brings forward some points connected with abdominal surgery, and considers first how death is occasioned in intestinal strangulation and intussusception. The author objects to the plan of placing cases of strangulation of the bowel amongst those of obstruction; for, in strangulation, obstruction is only one of its symptoms, but not the cause of danger or of death; whereas, in cases of intestinal obstruction, the obstruction is the prominent and dangerous feature. Numerous cases are recorded, and the first lecture is concluded by certain rules which the author lays down for practice, of which the following are some. 1. Laparotomy should be undertaken as soon as the diagnosis of acute intestinal strangulation is made, and should be proposed also in all cases of acute intussusception, and in chronic cases, which have failed within three or four days to be relieved by their treatment. 2. In all operations of laparotomy, the cæcum is the surgeon's best guide. If this be distended, the cause of obstruction is below; if it be found collapsed, or not tense, the obstruction must be above. 3. In a laparotomy, when the strangulated coil of bowel is gangrenous, the gangrenous knuckle should be resected, and the ends of the bowel should then be stitched to the edges of the wound, and an artificial anus established. 4. Nélaton's operation of enterotomy—that is, making an artificial anus above the seat of obstruction—should be performed in all cases of intestinal strangulation, where laparotomy is rejected or seems inapplicable. Having made clear in the first lecture that, when a patient dies from intestinal strangulation, death is not caused by the obstruction, but from changes brought about in the intestine itself, due to its strangulation, the author goes on, in his second lecture, to discuss the subject of intestinal obstruction, and the way in which it destroys life. There are several cases brought forward illustrating the subject, and extensive tables are drawn out, showing the necessity of early operation in cases of cancer or of syphilitic disease of the rectum. RICHARD NEALE, M.D.

3666. *Mikulicz on Laparotomy for Perforation of the Stomach and Intestine.*—According to Professor Mikulicz, of Cracow (*Centralbl. für Chirurgie*, No. 45, 1884), laparotomy is urgently indicated in any case of perforation of the stomach or intestine due either to direct or indirect violence, or to some pathological process. Existing peritonitis should not stand in the way of the operation, as it may be thus effectually treated. The main contra-indication of laparotomy in such cases is extreme exhaustion. In the first of his reported cases, the author of this paper had to deal with perityphlitis, which after a time became complicated by constipation, vomiting, and other symptoms of internal obstruction. Laparotomy was performed, and an incision, six inches in length, made in the linea alba. The abdominal cavity contained about two pints of very fetid fluid. The intestine, though bound down by numerous adhesions, showed no signs of any disturbance in the circulation. The patient died five days after the operation, and on *post mortem* examination the seat of perforation in the intestine was first discovered. The second case was one of a young man who, after having suffered from diarrhœa during six weeks, became constipated during the seventh week, and presented symptoms of ileus. The case was diagnosed as one of volvulus. On the performance of laparotomy, one pint of turbid serous fluid was found in the abdominal cavity. A volvulus was found, and the obstruction removed. The patient recovered from the more direct effects of the operation, but after an interval of a few weeks succumbed to intercurrent pneumonia. The patient in the third case was a young man who, having been disturbed during sleep, and having suddenly sprung out of bed, was seized with intense pains in the umbilical region, and presented symptoms of obstruction. Sixty hours after the outset of these symptoms the patient came under the care of Professor Mikulicz, who diagnosed internal incarceration, and at once performed laparotomy. In the abdominal cavity he found about a pint of thin badly smelling pus, and some undigested pieces of potato. On the left side, just above the brim of the pelvis, a perforation, six millimètres in length and four millimètres in breadth, was observed in a knuckle of the ileum. The mesenteric glands were much swollen, and as no other cause of the lesion could be determined, Professor Mikulicz came to the conclusion that this case was one of perforating ulcer from typhoid fever. The edges were refreshed, and brought together in the long axis of the opening by a dozen sutures of silk. The subsequent course of the case was satisfactory, although the abdominal wound opened up and gave exit to a considerable quantity of pus. In the fourth case, laparotomy was performed for rupture of the stomach. The opening existed near the diaphragm in the smaller curvature. The patient, whose stomach had been much distended, and whose abdominal cavity was filled with portions of food, died three hours after the operation.

3667. *Zesas on the Treatment of Paraplegia in Caries of the Spine.*—In an article (*Archiv für Klinische Chirurgie*, Band xxxi., Heft 2) on the treatment of paraplegia in spondylitis (Pott's disease), Dr. D. G. Zesas, of Glarus, advocates the application of Sayre's plaster bandage, all other recognised plans having failed in his practice. The theory given in most surgical text-books that paraplegia, occurring in cases of tubercular spinal caries, is caused by pressure of displaced bone on the cord, can only apply, Dr. Zesas holds, to those cases in which the paralysis has come on suddenly. In most cases, however, the paralysis is developed gradually, and is associated with clear symptoms of myelitis; and here it has been assumed that the compression is gradually effected, the spinal cord remaining sound for some time, but paralysis becoming after a time developed under the associated influences of bone-pressure and inflammation. According to Charcot, the primary tubercular deposit, which is almost always seated in the body of a diseased vertebra, infects the tissues on the posterior surface, so that a fungous growth protrudes through the posterior ligament and the anterior layer of the dura mater, and then, as it increases in size, presses on the cord or encloses it in an annular mass, and sets up irritative myelitis. This theory, Zesas holds, does not account for paraplegia in every instance; for often, on rectifying the vertebral deformity and relieving the pressure of bone on the cord, the paralysis may be removed. The prognosis in suddenly developed paraplegia from spinal disease is held to be favourable, whilst in slowly developed paralysis it is the reverse, as the spinal cord in the latter instance has very probably undergone some pathological change. The prognosis will be influenced by the duration of the paraplegia. In cases in which it has persisted for twelve months or longer, it will usually prove rebellious to every form of treatment. The author, regarding the paralysis as due to pressure of the bone, acting either directly or by setting up inflammation, holds that a rational treatment should consist in the removal of such pressure. The results of extension and counter-extension are not satisfactory; and, moreover, there is much difficulty in applying this method of treatment. Two cases are reported, in which Sayre's plaster jacket was used with very good results. In one case there was a complete cure, the author states, and in the other considerable improvement. In each of these cases the patient was kept at rest in the recumbent posture, and not allowed to set up except at meal times. The author warmly recommends Sayre's plaster jacket as the only rational means of effecting complete cure, or at least much relief, of the paraplegia, by diminishing the pressure to which the paralysis is due.

3668. *Von Bergmann on Extirpation of the Kidney.*—The following is an abstract of a paper read by Von Bergmann, of Berlin, at the recent meeting at Magdeburg of German naturalists and medical practitioners (*Centralbl. für Chirurgie*, No. 45, 1884). The operation is no longer a rare one; for, since Simon's first case, it has been performed 121 times. It may be indicated in a case of malignant tumour, or in one of pyelo-nephritis. In the former class of cases the operation is a very dangerous one, as it is necessary to perform laparotomy, and to make a double incision of the peritoneum. Moreover, a suppurating cavity may be formed behind the peritoneum, and discharge its contents into the abdominal cavity. Important mesenteric vessels are often divided, and thus a risk of gangrene of intestine is set up. Of twenty-four cases of operation of this kind, in seventeen death occurred during or soon after the operation, in five of which it was due to hæmorrhage. Only four patients recovered. In cases of cancerous disease of the kidney, metastatic and disseminated growths are usually found at the time of operation in the intraperitoneal and mesenteric lymph-glands. Extirpation of the kidney has had much better results in cases of pyelo-nephritis, as of forty cases twenty have been cured. In one case Von Bergmann attempted to attain a cure by simple incision of the numerous abscesses, but without success, as the suppuration persisted. The kidney was finally extirpated with a good result. This surgeon in the course of twelve months extirpated the kidney four times, in each case with success.

3669. *Morris on the Surgical Treatment of Calculus Impacted in the Ureter.*—Mr. Henry Morris, of the Middlesex Hospital, in an article published in the *Amer. Jour. of Med. Sciences*, Oct. 1884, states that it may be fairly inferred that a calculus impacted in the ureter, sufficiently near the vesical orifice to be felt with the finger, can with care and suitable instruments be extracted through an incision of the bladder-wall without fear of wounding the peritoneum or laying open the cavity of the bladder into the cellular tissue of the pelvis. The mode of operating is described as follows. 'The urethra having been rapidly dilated, if the patient be a female, or opened in the median line immediately in front of the prostate if the patient be a male, the neck of the bladder should be traversed by the index finger of the left hand, and a careful digital examination be made of the bladder-walls. If a hard fixed body be felt, covered over by the vesical mucous membrane, at or near the orifice of one of the ureters, a gum-lancet-shaped knife on a long slender shank should be introduced along the left index finger, and with it an incision should be made through the tissue covering the calculus. The knife should then be carefully withdrawn, and a slender scoop or curette, introduced along the index finger of the left hand still retained within the bladder, should be employed for gently turning the calculus out of its bed. Whilst using the scoop, as well as in making the incision, the nail of the left index finger, or the pulp of the finger itself, should be employed in fixing the calculus so as to prevent its slipping away from the orifice of the ureter, or even for pressing it downwards and forwards in the direction of the obliquity of the ureter.' The following, Mr. Morris suggests, are cases in which an exploration of the bladder should be made with the view of performing the above described operation on the ureter. '(1) In hydronephrotic or pyonephrotic enlargement of the kidney, associated with bladder symptoms, with the hope of re-establishing the natural drainage through the ureter. (2) Before nephrectomy is resorted to for hydronephrotic or pyonephrotic tumours, which have been opened or tapped in the lumbar region without benefit. (3) Before nephrectomy is resorted to in cases of suspected renal calculus, in which no renal tumour exists, and where, after digital exploration and puncture of the kidney through the groin, no stone is found. (4) In cases of sudden or rapid suppression of urine, or anuria, occurring after symptoms which have given rise to suspicion of stone in one or other or both kidneys.

3670. *Mannheim and Bessel-Hagen on Suprapubic Lithotomy.*—Dr. Paul Mannheim, of Berlin, has recently investigated on the bodies of fifteen children, by means of Petersen's method with some modifications, the line of reflection of the prevesical layer of peritoneum in young subjects. The results are of some importance, as former investigations of a like kind had been made only on adult subjects. In all the instances observed by Mannheim, even when the bladder was empty, a small extent of bladder surface free from peritoneum was found above the symphysis. The prevesical fold of peritoneum, on distension of the bladder and rectum, therefore ascends more promptly and to a further extent upwards in children than in adults. It was made out that distension of the bladder and of a bag placed in the rectum by about 90 grammes of fluid, suffices to force upwards the peritoneal fold to a point at least 4 centimètres above the symphysis, and so to enable the operator to practise the high section without risk of opening the peritoneal cavity. After a reference to Mannheim's contribution, Dr. F. Bessel-Hagen, of Berlin, states (*Centralbl. für Chir.*, No. 45, 1884) that Von Bergmann has successfully performed suprapubic lithotomy in six cases; two on children aged respectively 5 and 15 years, in one instance on a man aged twenty years, and in three instances on men between 60 and 70 years of age. An incision in the linea alba, carried upwards from the symphysis, was made down to the anterior surface of the bladder, which could be readily recognised through the presence of the prevesical venous plexus. The organ was then fixed with sharp hooks and opened, and, after the stone had been extracted and the vesical cavity had been washed out, the wound in the wall of the bladder was closed as securely as possible by both continuous and interrupted sutures, which did not include the mucous layer. The wound in the abdominal wall was then drained, closed by sutures, and covered by antiseptic dressings. All these cases ended in recovery; one in three and a half weeks, one in four weeks, one in five weeks, and in two cases in which there was intense purulen cystitis, not before the seventh week. With regard to the dread of urinary infiltration and of suppuration in the loose connective tissue behind the symphysis, it is pointed out that, with present methods of treating wounds, the conditions of the high operation are much more favourable than those of the perineal incision, which cannot be made and treated on a strictly antiseptic plan. Von Bergmann's cases have proved that the dangers of suprapubic lithotomy can be prevented, and the procedure thus rendered a safe one. They show also that the surgeon cannot trust alone to suturing of the vesica wound, to prevent urinary infiltration. In all but one of the six cases, the sutures had come away between the fifth and ninth days, leaving this wound still patent. In order to prevent any dangerous results of such condition, it is necessary during the after-treatment to overcome any tendency in the urine to alkaline decomposition by frequently repeated injection of the bladder.

3671. *Ogston on Trephining of the Frontal Sinuses for Catarrhal Diseases.* — Professor A. Ogston, of Aberdeen, calls attention in the *Medical Chronicle* for December 1884 to catarrhal disease of the mucous membrane lining the frontal sinuses. This disease, he states, is accompanied by symptoms that distinctly indicate its existence are often so severe as to call urgently for a remedy, and are curable by trephining. Catarrh of the frontal sinus, according to the author's experience, has no special connection with catarrh of the Schneiderian membrane, either in the form of acute coryza or in that of chronic inflammation. The symptoms of the disease are uneasiness and pain in the situation of the frontal sinus, and a discharge of pus from the nostrils, not abundant nor continual, but simply an occasional escape of small quantities of thick pus. No swelling or discoloration is perceptible over the situation of the frontal sinuses, but firm digital pressure elicits tenderness there. The patient usually complains of much discomfort, and is rendered miserable by the consciousness of continued distress. These symptoms are due to *retention*, and are such as are found in empyema of the antrum. A free cut being needed, and as there is no possibility of introducing a probe into the frontal sinuses from below, the only expedient is to open these sinuses from the brow, ensure the patency of the opening into the nose, and apply such measures as seem called for to the mucous membrane lining the interior of the cavities. In the operation a single vertical incision, an inch and a half in length, is made down to the bone over the nasal eminence of the frontal bone. The periosteum having been divided and pushed back, a trephine crown, of the size of a sixpenny-piece, is applied on the middle line. The exposed mucous membrane is now incised, and is found to be thickened and granular, and to inclose mucus, pus, or muco-pus. The orifice leading to the nose is now dilated, and a drainage-tube, of the size of a crowquill, or even larger, is pushed down so as to emerge at the nostrils, while its upper end is left in the cavity. Of late, the author has not trusted to drainage alone, but has removed with a sharp spoon or curette the diseased mucous membrane, and cauterised such soft parts as remained by brushing out the sinuses with a strong solution of chloride of zinc. The upper end of the drainage-tube lies in the sinus, and does not emerge on the brow. The skin-wound is then closed over the sinuses, and unites by first intention.

3672. *Jacquemart on Vesical Disturbances in the Early Stages of Locomotor Ataxy.*—In a recent contribution (*Jour. de Méd*, No. 11, 1884, Brussels) Dr. Jacquemart, of Paris, describes certain urinary symptoms which may sometimes occur in a very early stage of locomotor ataxy. It has already been pointed out by Fournier, and also by Guyon, that locomotor ataxy may commence insidiously in certain vesical disturbances; and that the subjects of this disease are often at its commencement affected with symptoms that might impose on the medical attendant, and lead him to suspect some decided and severe lesion of the urinary passages—as, for instance, cystitis, calculus, or stricture. The symptoms of morbid condition of the urinary organs vary much in form. The most frequent symptom, according to Fournier, is sluggishness of the bladder without retention. The urine cannot be passed save with considerable effort, and the patient has often to wait long for the appearance of the stream. This symptom is observed most frequently in the early morning. In some cases the patient complains of the micturition being prolonged and frequently excited, and sometimes of the stream being suddenly arrested. Incontinence is also a frequent symptom. This differs in character from the incontinence due to organic disease of the bladder, as it is essentially intermittent, takes place usually at night, and is always partial and incomplete. A third class of disturbances consist in frequent desire to micturate, and painful spasm of the bladder or vesical colic. Another morbid condition, though much less frequent than the others, is vesical anæsthesia. It is held by Dr. Jacquemart that, when the medical attendant observes such vesical disturbances, the etiology of which cannot be made out, he ought to suspect tabes, even in the absence of any marked symptom of this nervous affection. Again, where the vesical disturbances co-exist with any one of the ordinary symptoms of ataxy (abolition of patellar reflex, visceral crises, ocular disturbances), tabes should be diagnosed, even in the absence of any decided disorder in the co-ordination of movements. W. Johnson Smith.

3673. *Gluck on Repair of Destroyed Tendons.*—In the sitting of the Berlin Medical Society on Nov. 19, Dr. Gluck reported on a patient whom he had shown to the Society in February last, in whom the tendons of the extensor communis digitorum and the extensor indicis had been destroyed by a phlegmonous affection of the back of the hand. The place of the tendon was supplied by a plait of catgut fibres, extending from the metacarpo-phalangeal articulation to the transverse dorsal carpal ligament. The operation had succeeded perfectly, the functions of the missing tendons being now completely performed, ten months after. Dr. Gluck then showed another patient, aged 76, on whom he had performed the same operation in June, rather less extensively, but with equally good results. He believes that the irritation of function exerts a regenerative influence on the catgut, so that, instead of being absorbed, it becomes organised. He has tried a similar experiment with divided nerves, by stitching them to the ends of a decalcified bone drainage-tube, with the result that they became united. This method is recommended also by Prof. Vendoit, of Liege, and called by him 'névrotisation du tube osseux.' Dr. Gluck strongly recommended both operations.

3674. *Ebner on some Remarkable Cases of Dislocation.*—Dr. Ludwig Ebner, assistant in the surgical clinic at Graz, sends notes of three remarkable cases of dislocation to the *Allgem. Wiener Med. Zeit.*, of Nov. 25 and Dec. 9. The first is a case of presternal dislocation of the right clavicle, caused by a fall from a hayrick on to the threshing floor, the patient alighting on his head and right shoulder. The sternal end of the right clavicle presented the appearance of a hard prominent swelling in front of the manubrium, and the sterno-mastoid muscle of that side was remarkably prominent. An anæsthetic could not be given, on account of cerebral symptoms, and the attempts at reduction without it were ineffectual. It was, therefore, resolved to wait until the effects of the blow on the head had passed off, but the patient refused to remain long enough in the hospital. The second case was a double dislocation of the hip on to the obturator foramen. The patient was a miner, and was struck on the sacrum by a large lump of coal, while he was crouching on his heels at work. The thighs were abducted so much that the knees were 65 centimètres (26 inches) apart, and rotation outwards was also strongly marked. The only position in which he could remain was lying on his back, and, if one leg were moved, the whole pelvis moved along with it. Reduction was effected by bringing the thigh to a right angle, and then rotating inwards with simultaneous abduction and subsequent extension; and, after three weeks in bed, the patient was quite well again. The third case was one of simultaneous dislocation of the left hip and left shoulder, by a fall from a ladder, the left foot having first caught between the rungs, and then the weight of the body pulling the man to the ground. Reduction was easily effected, the hip being first attended to.

3675. *Kussmaul on the Treatment of Intestinal Invagination by Washing out the Stomach.*—The *Centralbl. für die Gesam. Ther.* for December contains the substance of a lecture by Professor Kussmaul on the treatment of intestinal invagination by washing out the stomach. He has done this in several cases, and has almost always found the relief to be immediate and lasting; the treatment being specially applicable to cases where, the exact position of the lesion not being known, more energetic operative interference is inadmissible. The chief advantage of removing gas and fæcal matter from the stomach is, that more room is thereby attained in the abdomen; and the digestive tract, being relieved from distension in its upper part, can more easily overcome the pressure and displacement at the seat of invagination. The exaggerated peristaltic action, too, is reduced to the normal, and an increase of the evil thereby avoided. If morphia have not already been administered, it is well to preface the operation with a subcutaneous injection; but it is found that the passage of the soft tube, which ought to be employed, causes less distress than the vomiting and straining induced by the lesion. Alice Ker, M.D.

3676. *Rosanoff on a Case of Hydrocele Cured by Elastic Pressure.*—In the *Meditz. Obozrenie*, No. 21, 1884, p. 808, Dr. P. G. Rosanoff, of Zvenigorod, records a case of chronic hydrocele, in which complete cure ensued after wearing a well-fitted elastic bag for about six weeks. An examination of the patient about fifteen months later showed that he was still entirely free from the former disease.

3677. *Radulovitch on Lithotrity in One Sitting in Adult Women.*—In the *Vratch*, Nos. 48, 50, and 51, 1883, Dr. V. Radulovitch, of Orel, reports a case of rapid lithotrity after preliminary forcible dilatation of the urethra, in a peasant woman, aged 18. The stone was about 26 millimètres in diameter, and weighed about one ounce. There was no fever, pain, or incontinence of urine after the operation. After a detailed consideration of this case as well as other cases of lithotrity and lithotomy in women from his own practice, and from the practice of G. A. Savostitzky (*Letopis Khirurg. Obschtchestva v' Moskvě*, 1874, vol. ii.), V. Pelikan (*Inaugural Dissertation* on 'Lithotrity in Women'), Vasilieff (*Vratch*, No. 6, 1881) &c., Dr. Radulovitch comes to the following conclusions. 1. Lithotrity in women must be most decidedly preferred to lithotomy. 2. In patients aged from 15 upwards, a careful diagnosis and measurement of the stone require cautious dilatation of the urethra. 3. Small-sized stones (under two centimètres in diameter) may be simply extracted; larger stones must be crushed and extracted, which operation must be performed at one sitting. [As the author says, 'he who only once performed lithotrity in one sitting with preliminary dilatation of the urethra and under chloroform, would not hesitate to call lithotrity in several sittings a barbarous operation.'] 4. Only very large and hard stones, which do not yield to the action or crushing instruments, might call for lithotomy in women. [The author admits the existence of such cases only in a theoretical way]. At all events, in an overwhelming majority of female cases lithotomy is quite superfluous. 5. Lithotrity through division of the urethra and especially of the neck of the bladder is dangerous to the patient's life and health, and may be easily substituted by lithotrity with preliminary dilatation of the urethra; hence lithotomy ought to be discarded from the list of means for the removal of stone of the bladder in women.

V. Idelson, M.D.

3678. *Werth on the Influence of Operations, especially Laparotomy, on the Temperature of the Body.*—Wegner, experimenting on animals, observed that opening of the abdominal cavity caused a sudden and very marked fall of the temperature; and on that account he argued that a room in which laparotomy was performed should be kept particularly warm. Professor Werth, of Kiel, has criticised Wegner's experiments, and noted that the latter observer only employed small animals for his researches, and opened the abdomen from the ensiform cartilage to the symphysis pubis, allowing prolapse of the intestines through the wound for a protracted period. Dr. Werth therefore made careful observations on the temperature of thirty-one patients who had undergone laparotomy, a thermometer being introduced into the rectum within half-an-hour after operation. With very few exceptions there was a distinct fall of temperature, on an average 5·2 decigrades. But he made similar observations in thirty-six cases, chiefly plastic operations on the vulva, vagina, and cervix, where the peritoneal cavity was not opened, and, except in six cases, there was an average fall of temperature of 4·5 decigrades. Hence the loss of heat during laparatomy must be due to much the same cause as in other operations. In no case could the loss be due to the operation-room having been insufficiently heated, since it was carefully kept warm for all the above operations. No direct relation between the duration of the operation and the extent of the fall of temperature could be established. Dr. Werth believes that the anæsthetic was, to a great extent, the cause of the fall of temperature, the effects of chloroform in this respect being well known; but the loss of blood must be the principal factor in the cooling process. [By wrapping up a large tumour in warm towels, immediately on its extraction through the abdominal wound, and keeping it covered until its pedicle has been secured and divided, much shock and loss of temperature may be avoided. This precaution is especially advisable when the spray is employed.—*Rep.*]

Alban Doran.

MEDICINE.

RECENT PAPERS.

3679. Allbutt.—Scrofulous Neck. (*Med. Times and Gas.*, December, p. 805.)

3680. Kidd.—A Case of Fatal Hæmoptysis from Bronchial Ulceration. (*Brit. Med. Jour.*, November, p. 1016.)

3681. Clark.—A Case of Relapsing or Intermittent Pneumonia in an Aged Man. (*Brit. Med. Jour.*, Dec., p. 1225.)

3682. Legroux.—Acute Rheumatic Arteritis, (*Lancet*, Nov., p. 964.)

3683. Atkinson.—The After-treatment of Vaccine Vesicles. (*Brit. Med. Jour.*, Nov., p. 1053.)

3684. Webb.—Perforation of the Vermiform Appendix. (*Australian Med. Jour.*, Oct., p. 437.)

3685. Johnson.—Aneurysm of the Aorta. (*Med. Times and Gazette*, Dec., p. 875.)

3686. Pettenkofer.—On Cholera. (*Berlin. Klin. Wochensch.*, Dec. 22.)

3687. Störk.—Enforced Feeding of Phthisical Patients. (*Wiener Med. Blätter*, Dec. 25.)

3688. Gaucher and Boursier.—Puerperal Fever in the Male. (*Rev. de Méd.*, Sept. 1884.)

3689. Vasilieff, P. J.—On Transmissibility of Scarlatina through a Healthy Person. (*Vratch*, No. 51, 1883, p. 811.)

3690. Thibierge.—Paralytic Obstruction of the Intestine.

Art. 3679. *Allbutt on Scrofulous Neck.*—In the *Med. Times and Gazette*, Dec. 1884, p. 805, Dr. Clifford Allbutt writes that the chronic enlargement of the glands of the neck, known as scrofulous neck, is secondary to irritation in the associated mucous membranes, and absorption therefrom; the chief of these being the mouth and throat, and the next in order the nasal, aural, and ocular surfaces; and sometimes from irritation upon the skin of the face and head. Speaking of the treatment of these cases, the author says that a residence at Margate, together with careful dieting and nursing, is the best means of cure in cases which are not far advanced. The cautious use of mercury, such as the solution of the bichloride with tincture of iron, is very good, unless the inborn frailty be very marked; and iodides with iron are likewise valuable. External applications should be used with caution. So soon, however, as the glands become adherent, either to each other or to the surrounding tissues, then it is most desirable to call in the surgeon, and to extirpate every caseous gland or portion of a gland. Mr. Teale has devoted much time and has had great experience in operating on these cases, and it is due to the combined exertions of Dr. Allbutt and Mr. Teale that numerous cases have been restored from a state of misery to enjoy a life of comparatively good health. The scar remaining after the operation is small, and after a year or two not very noticeable, provided the drainage be not kept up too long; it is better to risk a second operation than to keep the drainage-tube in for too long a period.

3680. *Kidd on a Case of Fatal Hæmoptysis from Bronchial Ulceration.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 1016, Dr. Percy Kidd records the case of a girl, aged 15, who had been under the care of Dr. Bruce at the Consumption Hospital, Brompton. She died suddenly from profuse hæmoptysis. At the *post mortem* examination, a large cavity was found in the apex of the left lung. A large firm *post mortem* clot filled the main bronchus, and the secondary bronchi on the left side. The bronchial tube to the upper lobe, about half an inch beyond the origin from the main bronchus, had been perforated by ulceration, which implicated also the main bronchus. The ulceration had extended into a secondary branch of the pulmonary artery, causing an opening as large as a hemp-seed. The bronchial ulcer was soft and ragged, and had none of the ordinary characters of scrofulous or tubercular ulceration. A little below, and internal to the opening into the pulmonary artery, was another perforation of the bronchial wall, leading into an irregular space containing a crumbling cretaceous bronchial gland. The hæmorrhage in this case was clearly due to perforation of the pulmonary artery by the bronchial ulceration, which, in its turn, had been set up by the presence of an enlarged calcareous gland.

3681. *Clark on a Case of Relapsing or Intermittent Pneumonia occurring in an Aged Man.*—In the *Brit. Med. Jour.*, Dec. 1884, p. 1225, Sir Andrew Clark contributes some remarks on the case of a patient, aged 82, who was first seen on March 25, 1884. He had been complaining of general malaise and feverishness during the previous five days. On examination, feeble breathing was detected at the posterior base of the right lung; the temperature was 102°. On the following day the symptoms were much the same, but in the afternoon there was a severe rigor, and the physical signs at the base of the right lung pointed to slight consolidation. On March 27 there was another rigor, and the signs of pneumonia at the right base were more marked. The patient did not improve much until March 30, when the temperature fell to 99° F. The following morning, however, he had another rigor, and fresh consolidation of the lung was diagnosed in the middle of the right back. On April 1 the patient was much better, and continued so until the evening of the 2nd, when he had another rigor, and consolidation was detected at the right apex. On the evening of the 3rd the consolidation at the right apex was extending, but during April 4 he improved, and seemed to be getting better until the evening of the 5th, when he again became very restless, and on the 6th was in a very weak state, dulness being now detected at the base of the left lung. The patient continued for some days in a precarious condition, and went through the same course of symptoms as he had previously undergone with the right lung. The consolidation of the left lung became gradually developed from base to apex, the base repairing whilst the apex was consolidating. By April 16, however, he began permanently to improve, and on May 6 he was up and about.

3682. *Legroux on Acute Rheumatic Arteritis.*—In the *Lancet*, Nov. 1884, p. 964, an article refers to a case, narrated by M. Legroux, of a young lady aged 22, whose family history was only characterised by the presence of the arthritic diathesis. At the age of twelve years the patient had an attack of acute rheumatism, which, however, left no trace behind it. In July 1884 she had a subacute attack, and after three weeks went to the seaside and seemed to improve considerably. At the beginning of August there was a quotidian fever, which could only be explained on the assumption of a malarial origin. On Aug. 15 there suddenly appeared numbness of the left hand, forearm, and arm, soon followed by acute pains and inability to move the fingers or other parts of the limb. There was no pulse to be felt in the left brachial, ulnar, or radial arteries, and gangrene was feared, but did not occur. At this time a systolic murmur was detected, but was masked by a pre-existing hæmic bruit. Dr. Charles Hardy, who saw the patient soon afterwards, diagnosed acute rheumatic inflammation of the brachial artery, because of the nodosities he felt along the vessel, and on account of the sensitiveness of the vessel, and the presence of a bruit all along the thoracic artery. Later on, the patient was seen by M. Legroux, and then the cardiac disturbance was marked by loud bruits, and the action of the heart was so tumultuous that it was almost impossible to analyse the sounds. There was also an aneurysm of the left axillary artery, as large as a plum. The limb became flabby and wasted, and the hand atrophied.

3683. *Atkinson on the After-treatment of Vaccine Vesicles.*—Dr. F. P. Atkinson, in the *Brit. Med. Jour.*, Nov. 1884, p. 1053, suggests the following directions to be given after each case of vaccination. 1. If the arm become red and inflamed, apply powdered oxide of zinc, starch, or flour. 2. Never apply moisture of any kind, whether in the shape of a poultice or cold compress, as it tends to convert the vesicles into open sores. 3. Never apply oil to prevent the clothes from sticking to the arm, as it will do nothing of the kind. If the scabs be rubbed off and the marks be deep and not inclined to heal, it is best to apply some small pieces of lint (of just the size of the sore) soaked in dilute nitric acid lotion (seven minims to the ounce), and keep them covered with oiled silk.

3684. *Webb on Perforation of the Vermiform Appendix.*—In the *Australian Med. Jour.*, October 1884, p. 437, Mr. Webb records three cases of perforation of the vermiform appendix which occurred in his practice, and which were not diagnosed during the patient's life. The first case happened in a girl, aged 15. Her illness commenced with simple stoppage of the bowels, accompanied with steady elevation of temperature. There was no vomiting. The patient died about a fortnight after the first onset of symptoms, which were throughout very unimportant. At the *post mortem* examination there was discovered blocking of the minute passage that traverses the appendix, sloughing of the part beyond the stoppage, and glueing together of the neighbouring intestine with lymph. The cause of the mischief seemed to be a hard fæcal concretion, having for its nucleus a raspberry pip. The second case occurred in a girl, aged 18. The symptoms were constipation, early and persistent elevation of temperature, and slight vomiting for the first two days. This subsided, and then there was general peritonitis. The patient died in ten days. At the *post mortem* examination, the appendix was found to be blocked with fæcal concretion, but no nucleus could be made out. There was general peritonitis, with adhesions round the seat of injury. The third case occurred in a middle-aged man, who consulted the author for constipation. The temperature was noted to be 101°. There was marked local tenderness over the right iliac region. The patient died suddenly after eight days, having only once vomited since the commencement of his illness. The *post mortem* examination disclosed strangulation of the vermiform appendix; the free end had been entwined in some old fibrous bands, and had become almost detached from its body; it was found lying amongst the contents of an abscess which had recently burst. The special indications of this lesion are summed up by the author. There is unaccountable obstruction of the bowels, with early and persistent high temperature, ranging from 100°·5 to 102°. The temperature may go higher, but it will not be lower. As regards treatment, there is very little hope of relief without abdominal section.

3685. *Johnson on Aneurysm of the Aorta.*—In the *Med. Times and Gazette*, Dec. 1884, p. 875, Dr. George Johnson, records the case of a man, aged 51, who had been in the habit of lifting weights, and had also been a liberal consumer of alcohol and tobacco. On physical examination a loud impulse was heard over the upper part of the sternum, followed by an accentuated second sound. There was no blowing sound. A pulsation could be felt in the first left intercostal space; and, on auscultating over the spinous processes of the second and third upper dorsal vertebræ loud tracheal breathing was detected. The left side of the chest was three quarters of an inch smaller than the right, and the respiratory sounds were much feebler on the left than on the right side. The diagnosis made was, an aneurysm of the transverse aorta, pulsating against the sternum in front, and pressing the bifurcation of the trachea back against the bodies of the upper dorsal vertebræ, thus lessening the supply of air to the left lung by its pressure on the left bronchus. The author contributes remarks on various signs which may lead one to suppose the existence of an aneurysm, before actual physical examination is made. When an aneurysm of the transverse aorta presses directly on the trachea, it very frequently causes a peculiar loud ringing cough, which is somewhat like the loud bark met with in some cases of hysteria; it is not a layrngeal but a tracheal cough, *i.e.* it arises in the trachea, and is mainly caused by the forcible driving of the current of air through a constricted and misshapen trachea, as a consequence of which the walls of the trachea are thrown into loudly resonant vibrations.

Richard Neale, M.D.

3686. *Pettenkofer on Cholera.*—In an address delivered at Munich on Oct. 15, Dr. Pettenkofer attacked Koch's position as to the etiology of cholera in the severest way, and his conclusions are summarised as follows in the *Berliner Klin. Wochensch.* of Dec. 22. Koch ignores to a remarkable extent facts already established in other ways. As long as thirty years ago, Pettenkofer had made the participation of some low micro-organism in cholera a hypothetical postulate; but the idea, due to the discovery of the bacillus, that cholera was a contagious disease, differed completely from his views, and was not supported by epidemiological facts. The following arguments speak against it. 1. Certain localities enjoy an immunity from cholera in spite of the implantation of its germs. 2. According to the statistics of the last twenty-six years, it is most prevalent in Calcutta during the dry hot season, the season most unfavourable for the development of low organisms. 3. The doctrine that cholera spreads by water is untenable, and has only arisen from superficial and fanciful investigations. 4. The frequency of cholera cannot be shown to be directly connected with the assembling together of large masses of people. In other words, the great pilgrimages of India are independent of the spread of cholera. 5. Moreover, cholera is spread by ships only when the local and temporal predisposition already exists, although the germ is constantly imported. Pettenkofer is so convinced of the untruth of the contagion theory, that he is ready to drink any pure cultivation of comma-bacilli himself, provided only that cholera does not exist in the locality at the time. (It is not stated whether he will previously set up a gastric or intestinal catarrh.) In conclusion, Pettenkofer says, 'I cannot possibly separate myself from epidemiological facts otherwise ascertained (than by Koch); I should be acting against my conviction, and against the interests of mankind. I believe the time has arrived when the contagion-theory must be given up, lest we throw away millions of money without any result at all.'

E. J. Edwardes, M.D.

3687. *Störk on the Enforced Feeding of Phthisical Patients.*—Dr. Carl Störk, of Vienna, describes (*Wiener Med. Blätter*, Dec. 25) a method for the enforced feeding of phthisical patients, which he has introduced lately, instead of the meat powder given by the stomach-pump, to which some patients greatly object. He prepares a mixture of finely triturated ham, mixed with milk, and introduces it, by means of a syringe, through a catheter, which is passed down only as far as about the level of the larynx. This is much better borne by the patients than the other method; and, when pain was present, interfering with the introduction of the catheter, he found that it was entirely prevented by brushing the fauces with a 20 per cent. solution of hydrochlorate of cucaine.

Alice Ker, M.D.

3688. *Gaucher and Boursier on Puerperal Fever in the Male.*—In the *Rev. de Méd.* for September, MM. Gaucher and Boursier record the case of a man who, after nursing his wife through a fatal illness of puerperal fever, was attacked with an infectious disease characterised by rigors, fever, albuminuria, swelling of the liver and jaundice, enlargement of the spleen, pulmonary congestion, and two patches of severe lymphangitis, situated one on the postero-internal surface of the left forearm in its lower two-thirds, and the other on the postero-internal aspect of the left thigh in the upper half. There were no excoriations perceptible. Suppuration subsequently ensued, as also in other places where lymphangitis appeared. The treatment consisted of sulphate of quinine, and incision of the suppurating spots with Listerian dressings. The man was cured. No other source of infection could be traced than the contagion to which the patient was exposed at the hands of his wife; and the authors ask, 'Is it not permissible, under these circumstances, to conclude in the existence of a puerperal fever in the male?' Paradoxical as it may appear at first, this conclusion seems justified by the consideration of the facts.

Kenneth Millican.

3689. *Vasilieff on a Case of Scarlatinal Infection through a Healthy Person.*—Differing from Fränkel, Kirschensteiner, and others, Dr. P. J. Vasilieff, of

Kaluga, states his belief (*Vratch*, No. 51, 1883) in the possibility of the scarlatinal poison being transmitted from one person to another through the medium of a third who remains safe and sound all the time To support his opinion, he quotes a case of his own.. In 1873, when there was not a single case of scarlatina in the whole town, a lady arrived from Orel (after several days' journey), to stay with a family which was under the professional care of the author. It happened that the lady entered the house in the author's presence, and he himself was able to hear from her mouth that 'She was so bored with nursing scarlatinal patients in Orel that she hurried away even without changing her dress (black woollen).' Within less than a week, all the children of the family lay in bed with scarlet fever. The lady, however, remained in Kaluga as healthy as in Orel.

V. IDELSON, M.D.

3690. *Thibierge on Paralytic Obstruction of the Intestine.*—Dr. G. Thibierge has described in his inaugural dissertation some cases of intestinal obstruction, caused by paralysis of the muscular coats of the gut and consecutive retention of the fæces. This paralysis may occur after the reduction of a strangulated hernia, or after an attack of peritonitis; but it is more often due to some nervous lesion. It is generally observed in old people suffering from habitual constipation. Vomiting is frequent when the obstruction has lasted some time, and often recurs every time the patient takes nourishment. The abdomen is much distended, and there may be a good deal of pain. When death occurs at that period, it is caused either by inanition or by asphyxia. In some cases there is a temporary improvement, followed by fatal collapse. Generally, however, recovery takes place after the obstruction has been relieved. The best treatment consists in galvanisation of the intestine. J. S. KESER, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3691. MACKENZIE.—Chronic Dysentery treated by Voluminous Enemata of Nitrate of Silver. (*Brit. Med. Jour.*, Nov. p. 1015.)

3692. COLLIE.—The Cold Bath in Enteric Fever. (*Brit. Med. Jour.*, Dec., p. 1123.)

3693. QUINLAN.—The Antipyretic Action of Salicin; also of Kairin. (*Brit. Med. Jour.*, Dec., p. 1124.)

3694. WYMAN.—Datura Stramonium in Painful Affections of the Joints. (*New York Med. Jour.*, Sept. 20.)

3695. FAUNTLEROY.—Chloral-Hydrate as a Vesicant. (*Southern Clinic.*)

3696. JELINSK.—The Use of Cucaine in Dysphagia. (*Wiener Med. Wochensch.*; and *Med. Times and Gaz.*, Nov., p. 755.)

3697. JEFFERSON.—The Danger of Ether in Obstructive Mitral Disease. (*Lancet*, Sept., p. 492.)

3698. Treatment of Diphtheria by Mercury. (*Med. Times and Gaz.*, Sept., p. 417.)

3699. LEFFMANN.—Chemical Incompatibilities. (*Practitioner*, August.)

3700. PRITCHARD AND HERSCHELL.—Cucaine as a Local Anæsthetic. (*Lancet*, Dec., p. 1167.)

3701. POPOFF, S. A., PROFESSOR.—On the Administration of Muriate of Cucaine in Catarrhal Angina, and Neuralgia of the Trigeminus. (*Vratch*, 1884, No. 49, p. 827.)

3702. ZAKHARIEVSKY, A.—On the Local Action of Cucaine on the Eye. (*Vratch*, 1884, No. 49, p. 827.)

3703. MITROPOLSKY, N. A.—On Antipyrin in Enteric Fever and Croupous Pneumonia. (*Medits. Obozr.*, 1884, No. 21, p. 821.)

3704. KOSTYLEFF, B.—On the Action of Antipyrin. (*Medits Obozr.*, 1884, No. 21, p. 823.)

3705. TRUSEWICZ, J. J.—On the Powerful Analeptic Influence of Subcutaneous and Intravenous Injections of Liquor Ammoniæ. (*Medits. Obozr.*, No. 21, 1884, pp. 837-43.)

3706. VASILIEFF, N.—A Contribution to the Study of the Action of Cold and Hot Hand-baths. (*Voenno-Meditz. Jurnal*, August 1884, pp. 295-348; and September, pp. 1-32.)

3707. PUSHKAREFF, V. O.—On Kairin in Typhus Fever. (*Ejened. Klin. Gazeta*, 1884, No. 26, pp. 401-7.)

3708. BALMASHEFF, A.—Observations on the Action of Burnt Alum in Intermittent Fever. (*Russkaia Meditzina*, 1884, No. 44, p. 905.)

3709. KURKOVSKY.—On Naphthalin in Dysentery. (*Russkaia Meditzina*, 1884, No. 45, pp. 932-33.)

3710. ROSENFELD, L.—On the Treatment of Dysentery by Phenolum Iodatum (*Vratch*, 1883, No. 45, pp. 718-19; and No. 47, p. 749.)

3711. KOMAROFF, N.—On Cinchonin in Intermittent Fever. (*Vratch*, 1883, No. 48, pp. 674-75.)

3712. LITCHKÜS, L.—A Contribution to the Study of the Action of Cold Baths. (*St. Petersburg Inaugural Dissertation*, 1884, p. 77.)

3713. JAKIMOFF, V.—A Contribution to the Study of Hot Baths. (*St. Petersburg Inaugural Dissertation*, 1883, p. 82.)

3714. PUTOKHIN.—Lemons in Intermittent Fevers. (*Russkaia Meditzina*, No. 30, 1884, p. 622.)

3715. TUMAS, L. J.—On a Case of Prolonged Cholelithiasis, ending in Recovery under the Administration of Turpentine. (*Ejened. Klin. Gazeta*, No. 29, pp. 449-58.)

3716. RODET.—The Treatment of Asthma. (*Jour. de Méd. de Paris*, No. 25, 1884.)

3717. MINGAZZINI.—The Joint Action of Antipyrin and Kairin. (*Gazz. degli Ospitali*, No. 104, 1884.)

ART. 3691. *Mackenzie on Chronic Dysentery treated by Voluminous Enemata of Nitrate of Silver.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 1015, Dr. Stephen Mackenzie states his belief that large enemata of nitrate of silver are of great value in the treatment of chronic dysentery or dysenteric diarrhœa. About a drachm of nitrate of silver is dissolved in three pints of tepid water in a Leiter's irrigating funnel, which is then to be connected by India-rubber tubing with an œsophageal tube with lateral openings. The patient being placed on his left side, with his hips well raised on a hair pillow, the terminal tube is passed about eight or ten inches into the rectum, and the fluid allowed to find its way by gravitation. If the injection do not return soon, it is advisable to throw up some chloride of sodium, in order to prevent absorption of the silver salt. Sometimes only one injection is required to produce a cure, although several may be necessary; still, if the treatment be persevered with, a cure is almost certain to result. [*Vide* LONDON MEDICAL RECORD, 1882, p. 225.]

3692. *Collie on the Cold Bath in Enteric Fever.*—Dr. Collie, in the *Brit. Med. Jour.*, Dec. 1884, p. 1123, writes that he has tried the cold bath treatment in cases of enteric fever, and found that in the milder cases, and in some of the severe cases in the early period of the disease, the bath, given once or twice daily, was very useful in relieving the discomfort produced by the heat, and in allaying restlessness and giving sleep; that, beyond temporary relief of symptoms, it had no effect on the course of the disease, or on the general mortality; and lastly, that, in the severe cases, the remedy was inadmissible, owing to its depressing effect on the body generally, and the exhaustion which its administration entailed; but, above all, to its definite and marked effect upon the circulation, which it invariably greatly weakened. The author considers the cold bath a useful addition in the treatment of enteric fever; but to say that it is the best mode of treating the disease, and that it lowers the death-rate, is carrying the matter too far.

3693. *Quinlan on the Antipyretic Action of Salicin; also of Kairin.*—Dr. Quinlan, in the *Brit. Med. Jour.*, Dec. 1884, p. 1124, writes that he uses the natural alkaloid salicin, in preference to sodium-salicylate or salicylic acid, and he begins the treatment of a case of rheumatic fever with a dose of 30 to 50 grains of salicin, according to the severity of the symptoms, and repeats it twice at intervals of an hour. The salicin must be given in doses of about 30 grains once a day, for some time after the patient is able to get about, or a relapse will occur. In cases where there is the slightest want of tone or fulness in the systolic sound of the heart, the author applies a large fly-blister over the whole cardiac region. Salicin is best taken on an empty stomach, either in a capsule or in wafer-paper. It is easily swallowed, suspended in milk. Kairin-hydrochlorate was introduced some two years ago by Dr. Filehne, and, in four cases in which it was used by the author, it proved a reliable, harmless, and satisfactory antipyretic. It is a yellowish grey crystalline powder, very soluble and manageable, but with an intensely acrid burning taste. The author gave it in doses of ten grains every hour and a half, and found that after four doses the temperature was reduced, the pulse lowered in volume, and copious perspiration brought on. The coloration produced in the urine was a slight greenish yellow. Erlanger recommends the use of sulphate of kairin; half a gramme to a gramme will cause a fall of from 2°·5 to 4° F. This effect appears in twenty minutes, and lasts two hours with half a gramme, and three hours with the gramme dose. In pneumonia, the relief supervening upon the fall of temperature is stated to be very marked. The temperature can be kept normal by the administration of three-quarters of a gramme every two hours. If this quantity be exceeded in elderly or delicate persons, cyanotic effects are said to be produced.

3694. *Wyman on Datura Stramonium in Painful Affections of the Joints.*—In the *New York Med. Jour.*, Sept. 20, 1884, Dr. Wyman states that for several years he has been in the habit of applying green leaves of the datura stramonium to painful joints from various causes, with the most satisfactory results. The leaves are wrapped round the joint for twenty-four hours, then fresh ones are applied. It is necessary to invest the inflamed joint with a layer of leaves thick enough to shut out the air, and prevent evaporation from the surface. Profuse perspiration follows, and pain and swelling gradually disappear.

3695. *Fauntleroy on Chloral as a Vesicant.*—Dr. Fauntleroy, in the *Southern Clinic*, writes that powdered chloral sprinkled on adhesive plaster, and melted by a gentle heat (not more than enough to cause the plaster to adhere), acts as a splendid vesicant. Within a few minutes a gentle warmth is felt, increasing for a short time and then gradually easing off, so that at the end of ten minutes all pain has ceased. As soon as it has ceased, the plaster is removed, and a blister will be found to have been as effectually raised as if cantharides had been applied for six hours. The plaster may be left on without dressing until it comes off by itself.

3696. *Jelinsk on Cucaine in Dysphagia.*—In the *Med. Times and Gazette*, November 1884, p. 755, an account is given, taken from the *Wiener Med. Wochensch.*, of a case of painful deglutition relieved by the use of cucaine. A man, aged 45, was suffering from tubercle with extensive swelling, and brawny infiltration of the epiglottis. He was only able to swallow milk in the minutest quantities, and was extremely wasted and prostrated. Dr. Jelinsk decided to try the effect of cucaine. Before the application, the man was made to drink some water; he had hardly swallowed a drop before he started up in the greatest pain, while the fluid returned through the nose. The lingual and part of the laryngeal surface of the epiglottis and fauces were then painted with a 10 per cent. solution of cucaine, and a minute afterwards the patient was again told to drink. He anxiously took a small mouthful, and then to the surprise of everybody he greedily swallowed the whole glassful at a single draught. One hour after the application he made a hearty meal (the first for two months); but soon afterwards the pain returned, and three hours after the painting was as severe as before, but was quickly relieved by the repetition of the drug.

3697. *Jefferson on the Danger of Ether in Obstructive Mitral Disease.*—Mr. Arthur Jefferson, in the *Lancet*, Sept. 1884, p. 492, records a case showing that the administration of ether is a very questionable practice in cases where there is obstructive valvular disease of the left side. A man, aged 52, was placed under ether, but took it badly; and just before the conjunctivæ became insensible the breathing was hurried and very shallow, but the pulse remained strong and regular. In a few moments the respirations almost ceased, and artificial respiration was resorted to with success. As the operation was urgent, the patient was allowed to partially recover, and then chloroform was administered. After a couple of minutes the pulse became very feeble, and the administration was stopped, the patient being brought round with difficulty by means of stimulants and cold water. In the evening the heart was carefully examined, and a slight thrill was detected at the apex, with a præsystolic murmur heard only at one spot. Mitral stenosis was then diagnosed. A week afterwards unmixed chloroform was inhaled for about forty minutes, without any bad symptom. The author explains the occurrence by supposing the ether to have caused an increase of blood-supply to the lungs, this surplus being prevented from escaping thence, owing to the contracted mitral orifice, thus causing congestion of the lungs, while chloroform alone produced no serious symptom.

3698. *Treatment of Diphtheria by Mercury.*—The *Med. Times and Gazette*, 1884, p. 417, quotes several papers, recently published in the New York and Boston medical journals, with reference to the use of large doses of mercuric chloride in diphtheria. Dr. Thallon advises the drug to be given in large doses and frequently. He usually employs one of the following formulæ. ℞ hydrarg. bichlor., gr. ½; tinct. ferri chlor., ʒiij.; glycerini, ʒss.; aquam ad ʒiij. A drachm to be given in water frequently as directed. Or, ℞ hydrarg. bichlor, gr. ½; vini pepsin., ℥iss.; elixir bismuthi, ℥iss. One drachm in water as directed. The condition of the false membrane is the best guide as to increasing, continuing, diminishing, or stopping the remedy. Dr. G. L. Smith has found much benefit by treating children with stimulants; a child one year old will take with advantage as much as a teaspoonful of brandy every hour. Dr. Linn states that suffocation from obstruction of the air-way in diphtheria is mainly due to a spasmodic condition of the glottis, and can be relieved by giving chloride of gold, which is a specific in simple croup. It should be given, dissolved in distilled water, the medicine being dropped into a glass. The dose for a child two years old is from one-fiftieth to one-thirtieth of a grain every hour until relieved. In diphtheritic croup, it should be given in conjunction with bichloride of mercury. Of the latter salt, Dr. Linn gives one-twentieth to one-twelfth of a grain every three hours to a child two to three years old, and one-eighth of a grain to an adult.

3699. *Leffmann on Chemical Incompatibilities.*—In the *Practitioner*, Aug. 1884, p. 135, an abstract is given of a paper by Dr. Leffmann on Chemical Incompatibilities. Referring to some of the well-known remedies, the author states that several preparations are used under the name of 'colourless tincture of iodine.' These preparations depend for their popularity on the fact that they do not stain the skin. They are prepared either by the use of ammonia, or of sodium sulphite or hyposulphite. They owe their particular property, or absence of property, to the neutralisation of the iodine; and just to the extent that the iodine is decolorised, so are they deprived of virtue. Potassium chlorate is employed by many physicians, as an oxidising agent, in diseases which have been supposed to express deficient oxidation; the author protests against its usefulness as an oxidising agent, stating that, under conditions and temperatures such as those which it meets in the human system, it is one of the most stable of bodies, and does not part with its oxygen or chlorine except under very great heat. Potassium permanganate is another drug employed on account of its oxidising properties; it is as little suitable for internal administration for such purpose as potassium chlorate, but for an opposite reason. Its chemical properties are developed by almost every substance, and in doses in which it is given it is decomposed and rendered inert very shortly after being swallowed. Caffeine citrate is a remedy much in favour; but there is no such drug in the market, and it is doubtful whether any such salt can be prepared. The commercial preparations are either pure caffeine, or variable mixtures of it with citric acid; so that, when the effects of caffeine are wanted, they are best obtained by the use of the pure alkaloid, and not by a pretended and uncertain compound of it.

3700. *Pritchard and Herschell on Cucaine as a Local Anæsthetic.*—Dr. O. Pritchard and Dr. G. Herschell, in the *Lancet*, Dec. 1884, p. 1167, contribute letters on the value of cucaine as a local anæsthetic. Dr. Pritchard wished to perform circumcision on a patient aged 23, and, having explained to him the action of cucaine, he resolved to give the drug a trial. A 4 per cent. solution of the hydrochlorate of cucaine was made in distilled water, and 4 minims of it were injected through the foreskin at four different points. In about twelve minutes anæsthesia was complete all round; the operation was then performed, the patient watching the proceedings with considerable interest, and feeling no pain at all. The local effects lasted long enough for the man to walk home and to go to sleep without feeling any pain. Dr. Herschell writes that a patient consulted him on account of a stricture of the urethra. The urethra was so sensitive and the patient so nervous, that no satisfactory examination could be made. The author then injected half a drachm of a solution of muriate of cucaine, recently manufactured by Corbyn & Co., and retained it within the urethra for five minutes. Instruments were now able to be passed without causing the slightest pain, until the urethrometer was introduced beyond the stricture, when it was found that the urethra was still very sensitive. More solution was therefore injected, and this time it was retained for thirty minutes. This completely deadened the pain, and the patient was able to bear the operation of having the stricture divided by Dr. Herschell's modification of Otis's urethrotome. The patient stated that the operation was almost painless. The author adds, he believes that it will be found that the passage of the large instruments and evacuating tubes, used in our modern operation of lithotrity, can be rendered entirely painless by a preliminary injection of cucaine, and that the treatment of irritable stricture by dilatation can by this means be deprived of more than half its terrors. RICHARD NEALE, M.D.

3701. *Popoff on Cucaine in Angina and Neuralgia of the Trigeminus.*—Professor S. A. Popoff, of St. Petersburg (*Vratch*, 1884, No. 49, p. 827), writes that in several cases of catarrhal angina he painted the fauces and pharyngeal cavity with a 10 per cent. solution of muriate of cucaine, and saw, within fifteen minutes, complete disappearance of all discomfort and painful swallowing. Cucaine acted with especial benefit when any great swelling of the mucous membrane of the fauces was absent. The author also successfully employed hypodermic injections of cucaine in a case of severe neuralgia of the trigeminus in a hystero-epileptic lady, aged 40. Paroxysms of excruciating pain returned every five or ten minutes day and night for two days (after the extraction of the root of a tooth). On the third day an injection of a half a syringeful of the 10 per cent. solution over the painful spot was made; it brought an instantaneous relief which lasted for six hours. Four injections in two days permanently relieved the patient.

3702. *Zakharievsky on the Local Action of Cucaine on the Eye and Ear.*—In the *Vratch*, 1884, No. 49, p. 127, Dr. A. Zakharievsky, of Tzivilsk, Kazan Government, describes two cases of extraction of cataract after the linear method of Graefe in two very sensitive male patients, aged 45 and 56 (one of whom simultaneously suffered from exophthalmic goître), in which he used, with the best results, a 5 per cent. ointment of cucaine and vaseline. The ointment was introduced into the conjunctival sac three successive times, at intervals of ten minutes. The operations were completed without any pain to the patients. The author tried also the introduction of the ointment into the auditory meatus, in a case of very painful acute myringitis in a woman. Within five minutes pain disappeared for several hours, and on reappearing was again successfully removed in the same way.

3703. *Mitropolsky on Antipyrin in Enteric Fever and Croupous Pneumonia.*—Dr. N. A. Mitropolsky, of Moscow (*Medits. Obozr.*, 1884, No. 21), having administered antipyrin in two cases of typhoid fever and in one of pneumonia, came to the conclusion that the drug as an antipyretic outrivalled all other known means. It is indicated in cases of enteric fever and croupous pneumonia where the temperature rises above 40° C. (104° F.) Being here administered, antipyrin surely and safely lowers the temperature by 3° or 4° C. for ten to eighteen hours. As the drug is prone to give rise to heartburn and sickness, it is better to use it in enemata (60 grains in three twenty-grain doses, at intervals of an hour).

3704. *Kostyleff on the Action of Antipyrin.*—In the *Meditz. Obozr.*, 1884, No. 21, p. 823, Dr. B. Kostyleff, of Tver, writes that he has administered antipyrin in relapsing fever, enteric fever, and pulmonary phthisis. From his observations he draws the following conclusions. 1. Antipyrin is a powerful antipyretic, but it must be administered in large doses (30 grains for the first dose, followed by several fifteen-grain doses at intervals of one hour, to an adult). However, it is not an absolutely reliable agent, since even drachm doses sometimes bring about but a slight antipyretic effect, or even no effect whatever. 2. Cardiac weakness does not contraindicate the administration of antipyrin. 3. The drug is not so well borne by the patient as some observers assert. It often produces nausea, vomiting, and abdominal pain. 4. Its antipyretic action develops itself very rapidly; the fall of temperature beginning within less than an hour after the administration of a dose. The fall is accompanied by profuse perspiration. When antipyrin is introduced through the rectum, the temperature falls more slowly than when the drug is given internally. 6. The general state of the patient improves proportionately to the degree of decrease of temperature. [The author never saw any disturbance of vision and hearing, or any rash like that described by Cahn in the *Berlin. Klin. Wochensch.*, 1884, No. 36.] 7. The re-elevation of the temperature begins usually in less than twelve hours, and sometimes is accompanied by rigor. 8. Children bear antipyrin better than adults. [Like Dr. Argutinsky (*see* London Medical Record, 1885, Jan. 15, p. 11), Dr. Kostyleff did not observe in children any marked perspiration from antipyrin.]

3705. *Trusewicz on the Analeptic Action of Subcutaneous and Intravenous Injections of Liquor Ammoniæ.*—In the *Meditz. Obozr.*, No. 21, 1874, p. 837, Dr. J. J. Trusewicz, of Cronstadt, draws attention to the well-known powerful stimulant action of hypodermic and intravenous injection of liquor ammoniæ. He details the case of a gentleman, aged 21, who had attempted suicide by swallowing about three-quarters of a glass of crude hydrochloric acid, and about an hour and a half later was brought into the hospital in a state of extreme prostration. In spite of the use of various analeptic means (such as the internal administration of liquor ammoniæ and wine, inhalation of ammonia, subcutaneous injections of ether and camphor, enemata of champagne with mustard spirit, &c.) collapse progressed, and death was seemingly imminent. At the end of four hours the author tried, as a last resort, a hypodermic injection of about 10 or 12 drops of liquor ammoniæ into the right forearm of the pulseless and senseless patient. Almost instantly the patient opened his eyes, asked for water, and complained of pain about his throat; the pulse became perceptible. From this moment a gradual improvement followed, and the patient ultimately recovered. At the spot of the injection of ammonia a slough formed, which subsequently fell off, leaving an ulcer about one centimètre in diameter and two millimètres in depth. Dr. Trusewicz mentions also two other cases of seemingly hopeless prostration in which he saved his patients by subcutaneous injection of a syringeful of liquor ammoniæ. The author winds up his article with the literature of the subject; he mentions the following authors:—Drs. Sokolovsky, Penfold, Fayrer, R. Tibbits, Davidson, H. Cotton, A. Flint, Richardson, Sulzer. [Many other references may be found in Dr. Neale's *Medical Digest*, sects. 253: 5-6, 509: 3, &c.– *Rep.*]

3706. *Vasilieff on the Action of Cold and Hot Hand-baths.*—In order to ascertain the action of hand-baths, Dr. N. Vasilieff, of St. Petersburg (*Voenno-Meditz. Jurnal*, August and September 1884) has carried out 100 observations on 43 patients, aged from 20 to 78. The temperature of hot baths varied from 30° to 35° Reaumur (99°·5 to 110°·75 Fahr.), that of cold baths from 5° to 13° Reaumur (45°·5 to 63°·5 Fahr.). The duration of the baths varied between 15 and 30 minutes. The author arrived at the following conclusions. 1. Under the influence of hot hand-baths, *a*, the temperature in the auditory meatus rises; *b*, the frequency of the pulse and respiration increases; *c*, the blood-tension in the temporal artery is augmented; *d*, the fundus of the eye becomes more intensely coloured, which phenomenon depends upon the dilatation of the veins, or, possibly, of the arteries also. 2. Under the influence of cold hand-baths—*a*. the temperature in the auditory meatus, as well as, *b*. the arterial tension, falls; *c*. the pulse becomes slower; *d*. the respiration becomes deeper, but its frequency does not present any constant changes; *e*. the ocular fundus becomes paler, which is dependent upon the contraction of arteries and collapsing of veins. In other words, hot hand-baths increase, and cold hand-baths decrease, the amount of blood in the head. Hence the opinion of some clinicists that hot hand-baths present a revulsive means in certain hyperæmic and inflammatory states of the brain and its meninges, is utterly wrong. As to cold hand-baths, they may be recognised as a true revulsive agent in the cases just mentioned. To illustrate the good therapeutic action of cold hand-baths, the author adduces three cases reported by Askotchensky in the *Mediz. Zeit. Russl*, 1851, No. 30, in which obstinate and profuse nasal hæmorrhage was quickly and permanently arrested by a single ice-water hand-bath.

3707. *Pushkareff on Kairin in Typhus Fever.*—In the *Ejened. Klin. Gazeta*, 1884, No. 26, p. 401, Dr. V. O. Pushkareff, of St. Petersburg, states that, having studied the action of kairin in eight strong patients with petechial typhus, he arrived at the following conclusions. 1. Kairin markedly lowers the temperature in all cases of typhus fever. 2. In some cases the temperature may be kept at a low level by the continued administration of kairin, but in other cases it again reaches high figures in spite of the repeated use of large doses of the drug. 3. Besides the changes in the temperature, the drug does not produce any other influence on the course of typhus fever. 4. The high price of the drug, the difficulty of dosage (the necessity of almost hourly measuring the temperature), and the injurious action of kairin on the red blood-corpuscles [*see* Morokhovetz's article in the London Medical Record, 1884, October, p. 421] prevent any practical use of kairin in the treatment of typhus fever. Like

Neviadomsky and other observers, Dr. Pushkareff also saw collapse from kairin (in a case of enteric fever).

3708. *Balmasheff on Burnt Alum in Intermittent Fever.*—In the *Russkaia Meditsina*, 1884, No. 44, p. 905, Dr. A. Balmasheff, of Jaroslavl, states that he tried burnt alum in more than fifty cases of malarial fever which broke out amongst soldiers of the Uglitz Regiment immediately after the arrival of the latter from a healthy town to Pinsk (a classical malarial locality). The results of the treatment were as negative as possible; not even the slightest improvement in any case was noted, and in all the instances the author was compelled to fall back on quinine. The author vaunts the results obtained by him from a combination of quinine with Fowler's solution, as well as with morphia. The latter combination had been recommended several years ago by Dr. Lewis. [In the *Voenno-Sanitarnoie Delo*, No. 39, 1884, Dr. Anfimoff, of Stavropol (a strongly malarial locality), writes that he also is utterly disappointed with the alum treatment of intermittent fever.—*Rep.*]

3709. *Kurkovsky on Naphthalin in Dysentery.*—In the *Russkaia Meditsina*, 1884, No. 45, p. 932, Dr. Kurkovsky, of Tula, relates a case of dysentery treated and cured (apparently) by the internal administration of naphthalin. The drug was given every other day in single ten-grain doses, in combination with half an ounce of castor-oil.

3710. *Rosenfeld on the Treatment of Dysentery by Iodised Phenol.*—In the *Vratch*, 1883, Nos. 45 and 47, Dr. L. Rosenfeld, of Yitomir, describes his experience in the treatment of epidemic dysentery by enemata made of 1 part of iodine and 2 parts of carbolic acid, dissolved in 120 parts of glycerine. For one enema one drachm of the solution, with five ounces of water for children, and with two ounces for adults, was used; the administration being repeated three or four times daily. After two or three days' treatment by the enemata, the offensive odour and bloody character of the fæces, the tenesmus, and discharge of membranes, all disappeared, giving place to a mild mucous diarrhœa. Of 176 cases treated by iodised phenol, 136 recovered, 6 died; in 34 cases the issue remained unknown.

3711. *Komaroff on Cinchonin in Intermittent Fever.*—In the *Vratch*, 1883, No. 48, p. 674, Dr. N. Komaroff writes that from 1880 to 1883 he administered muriate of cinchonin to 693 malarial patients, and never saw any untoward effects like those pointed out by Dr. Enko and others (*see* the London Medical Record, Jan. 1884, p. 20). Giddiness and noise in the ears did not occur after cinchonin more often than after quinine. Vomiting (immediately after the administration of the drug) was seen only twice. As to its antimalarial action, cinchonin is twice as weak as quinine. To cure a case of moderate severity it was usually necessary to administer from 1 to 2 drachms of cinchonin, in ten-grain doses, given at intervals of two hours, twice or thrice daily before the expected paroxysm; while quinine gave the same results, when used in the quantity of half a drachm and a drachm, in five-grain doses administered in a similar manner. Of 693 cases, in 26 (inveterate quartan cases with an enormous spleen) it proved necessary to replace cinchonin by quinine with iron. The treatment by cinchonin is three times as cheap as that by quinine.

3712. *Litchküs on the Action of Cold Baths with Frictions.*—While Brand, Immermann, Roehrig, and Schott recommend the combination of cold baths with rubbings, Jürgensen, Senator, and Mosler find these manipulations of no use whatever. To throw some light on the real state of the matter—that is, to learn whether cold baths, combined with friction, were really more effective in their antipyretic action than ordinary cold baths—Dr. L. Litchküs (*St. Petersburg Inaugural Dissertation*, 1884) undertook 60 experiments on 11 patients (8 males with typhoid fever, and 3 females with puerperal endometritis of the body of the womb). In 30 experiments cold baths without frictions were made; and in 30 the patients were rubbed with a piece of cloth all over the body both before and during the bath. The temperature of water was invariably 20° R., and the duration of each bath was exactly ten minutes. From these observations the author draws the conclusion that cold baths with simultaneous friction decidedly deserve to be preferred to ordinary baths, since the former lower the febrile temperature more considerably than the latter. Further, by the end of two hours after a bath with rubbing, the temperature proves to be lower (comparatively with the original temperature) than in the case of an ordinary bath. Finally, while in the latter case the patients always feel uncomfortable, and shiver both during and after the bath, the use of cold baths with rubbing is almost entirely free from any discomfort of the kind. The only drawback of baths combined with energetic frictions is, that the latter sometimes are followed by irritation of the skin (which in one of the author's cases amounted to an actual rash, and compelled him to give up any further experimentation).

3713. *Jakimoff on the Action of Hot Baths.*—Keeping in view the elucidation of the action of hot baths on the non-febrile system, Dr. V. Jakimoff (*St. Petersburg Inaugural Dissertation*, 1883) carried out, in Professor V. A. Manasseïn's clinic, 155 observations on 68 subjects, 27 of whom were healthy and 41 reconvalescent. The age of the subjects varied between 17 and 44, but the main bulk of the experimented upon was aged from 21 to 26. The temperature of the water varied between 28° and 32° R. (95° to 104° F.), but mostly was from 28° to 30° R. The duration of a bath was usually fifteen minutes, but on several occasions a ten minutes' bath was used. The action of hot baths on the healthy (apyretic) system is described by the author thus. 1. The temperature rises, the rise going on uniformly in the external auditory meatus, axillary grooves, and rectum. After the bath, the temperature in the meatus falls more rapidly than that in the axilla, and the axillary temperature more rapidly than the rectal. The rectal temperature usually remains elevated, even at the end of two hours after the bath. Therefore, the action of hot baths on the systemic temperature lasts not less than two hours. 2. The pulse and respiration increase in frequency; the arterial tension decreases. 3. Muscular strength becomes weaker. 4. The loss of bodily heat through radiation increases, but in a slight degree. 5. Invisible cutaneous perspiration considerably increases, the increase lasting longer than half an hour. [The action of hot baths on the healthy system was studied also by Kirëëff ('On the Influence of Hot and Cold Baths on Healthy Man,' in *Meditz. Vestnik*, Nos. 10 and 11, 1861), Stolnikoff ('On Examination of Sensibility in Healthy Man under the Influence of Full

Hot Baths), in Manassein's *Sbornik Rabot*, Vol. iii.; and 'On the Influence of Fever on the Respiratory Muscles and Elastic Tissue of the Lungs'), Soldatoff ('A Contribution to the Study of Cutaneous Perspiration,' in Botkin's *Arkhiv Kliniky Vnutr. Boleznei*, Vol. v., Part I.), Geltovsky (in the *Arkhiv Sudebn. Medits.*, 1869, Vol. ii. and iii.—*Rep.*]

3714. *Putokhin on Lemons in Intermittent Fevers.* In the *Russkaia Meditzina*, No. 30, 1884, p. 622, Dr. Putokhin, of Mosalsk, eulogises decoction of lemons as a cheap substitute for quinine in the treatment of intermittent fevers. The decoction was prepared by cutting a lemon in slices, putting into three glasses of water, and boiling until one glass of liquid remained. The preparation was given, a tablespoonful every one or two hours, in half a glass of boiled water, to which sometimes a few drops of opium were added (to prevent any possible irritation of the stomach). In three cases the author tried also burnt alum, but, like Shkolnik, quite unsuccessfully. [Decoction of lemons was recently recommended in malarial fever by Dr. Maglieri; *see* the LONDON MEDICAL RECORD, May 1883, p. 19. According to the *Medical Digest*, sect. 1486: 6, lemon-juice, conjointly with coffee, was used in ague by Holsbeck.—*Rep.*]

3715. *Tumas on a Case of Recovery from Cholelithiasis under the Use of Turpentine.*—In the *Ejened. Klin. Gazeta*, No. 29, 1884, p. 449, Dr. L. J. Tumas, of Professor Botkin's clinic, details at considerable length an interesting case of a woman, aged 40, with unusually severe symptoms of cholelithiasis, the first signs of which seemingly appeared about twelve years ago. Three weeks' treatment by alkalies (artificial Karlsbad salt) having brought no improvement, turpentine with ether was tried. Two drops of the former with four drops of the latter were given in capsules, two or three times daily. On the eighth day of the turpentine treatment, a round gall-stone, 12 millimètres in diameter, was found in the stools. From this day the paroxysms of agonising pain ceased, and gradual recovery followed.

V. IDELSON, M.D.

3716. *Rodet on the Treatment of Asthma.*—The following rules of treatment are given by the author in the *Jour. de Méd. de Paris*, No. 25, 1884. During the paroxysm, the best means consist in subcutaneous injections of morphia and inhalations of iodide of ethyl. Twelve drops of the latter, poured on a handkerchief and inhaled, procure almost immediate relief. The different papers and cigarettes which have been recommended are worthy of a trial, but soon lose their efficiency. Between the attacks, a change of air and of occupation is often essential. In catarrhal asthma the treatment must be directed against the bronchitis and laryngitis, which are often benefited by a stay in a warm climate, or at Royat or Cauterets. According to M. Hardy, very good results are sometimes obtained by means of a blister applied to the thigh or arm. In nervous asthma, bromide and iodide of potassium are the most useful remedies, especially the latter. Gymnastics and baths of compressed air can also be recommended. When the paroxysms of asthma occur in people suffering from chronic cutaneous eruptions, arsenic and the Mont Dore cure are preferable to other remedies.

J. S. KESER, M.D.

3717. *Mingazzini on Antipyrin and Kairin.*—The author gives details of several cases where these drugs were used together. The mixed drugs produced a much more marked fall of temperature than an equal quantity of either drug given separately. The lowering of temperature also lasts longer. Kairin, administered with antipyrin, does not give rise to the inconveniences that are apt to follow it when given by itself.

WILLIAM R. HUGGARD, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

3718. REID.—Three Cases of Operation (Alexander and Adams) by Shortening the Round Ligaments for Uterine Displacements. (*Brit. Med. Jour.*, November, p. 958.)

3719. ELDER.—A Case of Alexander's Operation of Shortening the Round Ligaments in a Case of Aggravated Prolapse and Retroflexion. (*Brit. Med. Jour.*, Nov., p. 959.)

3720. THOMPSON.—An Absorbent and Antiseptic Diaper. (*Brit. Med. Jour.*, Nov., p. 868.)

3721. DUNCAN.—Puff-balls in Uterine Hæmorrhage. (*Brit. Med. Jour.*, Nov., p. 907.)

3722. MORGAN.—Painful Mamma in Young Girls. (*Brit. Med. Jour.*, Nov., p. 1078.)

3723. EDDOWES.—A New-born Infant of Extraordinary Size. (*Lancet*, Nov., p. 941.)

3724. BOLZONI, GUIDO.—On the Diagnostic Value of the Fœtal Heart-beats. (*Gazz. Med. Ital. Prov. Venete*, Oct. 4, 1884.)

3725. ZWEIFEL, DR. P.—On the Treatment of Retro-uterine Hæmatocele. (*Arch. für Gynäk.*, Vol. xxiii., Part 3.)

3726. ALBERTS, DR. OTTO.—Hæmatocele, Hæmatosalpinx, and the Reflux Theory. (*Arch. für Gynäk.*, Vol. xxiii., Part 3.)

3727. KOLISKO.—On Psammomatous Cancer of the Ovary. (*Medizin. Jahrbuch von der Konig. Kaiserl. Gesellschaft der Aerzte.* Jahrgang 1884, Heft ii., iii.)

3728. RENIL.—A New and Constant Sign of Pregnancy in the Early Months. (*Prager Med. Wochensch.*, 1884, No. 26.)

ART. 3718. *Reid on Three Cases of Operation (Alexander and Adams) by Shortening the Round Ligaments for Uterine Displacements.*—Dr. W. L. Reid, in the *Brit. Med. Jour.*, Nov. 1884, p. 958, reports three cases in which he operated with a view of replacing displaced uteri. One had suffered for ten years from excessive leucorrhœa, with an uterus much hypertrophied and retroflexed. All kinds of treatment had been resorted to, but no permanent relief had been obtained. The author then decided to perform the following operation. The pubes being shaved, and washed with carbolic acid, an incision was made, under the spray, on the left side, from the pubic spine upwards and outwards for two inches, and carried down to the tendon of the external oblique muscle. The external abdominal ring was next felt, and the tissues coming out of it were gathered up by an aneurysm-needle. They were then grasped by a pair of broad-pointed dressing forceps, and freed from the surrounding tissues by means of a scalpel, when, by continual pulling, they very gradually came out, until the firm round ligament appeared. The same procedure was repeated on the opposite side. A sound was then passed into the uterus, and the ligaments were pulled upon until they fixed the womb in its natural position. Fully two inches were found drawn out on each side. Three strong chromicised catgut stitches were passed through the pillars of the ring, each transfixing the cord. To take the strain off the ligaments, a pessary was introduced, and a dressing of gauze and cotton-wool applied. The patient was dismissed from hospital twenty-six days after the operation, and continued much improved in health when seen some months later. Two other cases are recorded, both of which were much improved by the operation. The author concludes by remarking that, from the results of his three cases, he cannot promise much in the way of certain and immediate relief from this operation. It remedies the position, but not the condition of the uterus. The cases in which it is justifiable are those which continue to be obstinate to other modes of treatment, and in which there is a hope that, by remedying the malposition, the disordered condition may be more readily subdued.

3719. *Elder on a Case of Alexander's Operation of Shortening the Round Ligaments in a Case of Aggravated Prolapse and Retroflexion.*—In the *Brit. Med. Jour.*, Nov. 1884. p. 959, a case is recorded by Dr. Elder of a woman who, at the age of 36, whilst lifting a heavy weight, felt something in 'her inside give way,' and for ten years afterwards suffered constantly from much discomfort arising from a heavy retroflected and prolapsed uterus. She suffered in addition from a badly-ruptured perinæum, and most urgent incontinence of urine, amounting to constant dribbling when in the erect position. All kinds of treatment having failed to give relief, Dr. Elder decided to perform Alexander's operation on March 15. An incision was made down upon both round ligaments. No difficulty was found in separating them from the surrounding tissues, and they were pulled out fully an inch and a half, and whilst the uterus was held in normal position, the slack of the ligaments was sutured to both sides of the wound, which was then dressed with iodoform and absorbent cotton-wool. On April 5 the wounds were all but healed, and in a few weeks the patient had resumed her ordinary household duties. The uterus was normal in position, and distinctly diminished in size.

3720. *Thompson on an Absorbent and Antiseptic Diaper.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 868, Mr. St. Clair Thompson describes a most valuable form of diaper, now used in the Queen Charlotte's Lying-in Hospital. The diapers are made of wood-wool, enclosed in oblong bags of corrosive sublimate gauze. These bags are about seven inches long, by three inches broad, and about half-an-inch in thickness. They are tacked on to strips of waste linen (about four feet long), by which they can be attached to the binder, and kept accurately in position. They weigh less than half an ounce; they are soft, flexible, cool, can be closely applied, and cause no irritation. They have a great capacity for rapid absorption. The natural antiseptic properties of wood-wool are increased by the presence of corrosive sublimate, in the strength of ½ per cent.

3721. *Duncan on Puff-balls in Uterine Hæmorrhage.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 907, Mr. T. Duncan relates the case of a lady aged 26, who was the mother of three children, and then suffered from a miscarriage. Four weeks afterwards the author was sent for and found his patient quite bloodless. On inquiry, he learned that there had been hæmorrhage from the womb every day during the last four weeks, and that during the previous night it had become alarming. On examination the os uteri was found to be dilated, so as to admit the tip of the index finger. Astringents and ergot were ordered but they produced no effect, even when injected. The vagina was then plugged, but the hæmorrhage still continued. Mr. Duncan then determined to try the result of using a puff-ball. One half of the puff-ball was taken, and a piece of thread was attached to it. The ball was placed against the os uteri, and the thread was secured to the thigh. During the next twenty-four hours the hæmorrhage was much less. The other half of the puff-ball was placed against the os on the following day, and the hæmorrhage ceased entirely. The patient made a good recovery, and has menstruated regularly ever since. [An interesting paper on the hæmostatic process of the puff-ball is to be found in the *Lancet*, July 1882, p. 637.—*Rep.*]

3722. *Morgan on Painful Mamma in Girls.*—Mr. J. H. Morgan, in the *Brit. Med. Jour.*, Nov. 1884, p. 1078, describes the case of a well-made girl, aged 11½ years, who had suffered from severe pain in the left mamma for some time, which had lately become more acute; the gland was but little enlarged, and showed no symptoms of inflammation, but was the seat of great pain and very tender to the touch. The pain was continuous, with exacerbations. There was no history of injury; the catamenia had not appeared. Shortly afterwards, the right mamma became affected in exactly the same way. Neither local nor general treatment afforded relief. After some weeks, the pain began to intermit, and at length gradually disappeared. It was suggested that this pain was not due to inflammation, but to some developmental changes in sympathy with the ovaries and in the organs of generation.

3723. *Eddowes on a New-born Infant of Extraordinary Size.*—In the *Lancet*, Nov. 1884, p. 941, Dr. Eddowes, of Crewe, writes, that on Nov. 14 he attended a woman who was delivered of a male child of extraordinary size, weighing 20 lbs. 2 oz., and measuring 23 inches in length, and 14½ inches round the chest at the level of the nipples; it was well-developed and quite healthy.

RICHARD NEALE, M.D.

3724. *Bolzoni on the Diagnostic Value of the Fœtal Heart-beats.*—Dr. Bolzoni has kept a careful record of the fœtal heart-beats in all cases admitted to the obstetric clinic of the University of Padua for the scholastic year 1883-84. Of these, he selected one hundred women between the eighth and ninth solar month of gestation, and in whom delivery was normal. The heart-beats were counted in each three times, always at the same hour, and the mean taken. On the birth of the child, its sex, weight, length, and biparietal diameter were entered in the register and compared with the previously determined heart-beats. He finds that the number of the heart-beats is not in relation to the sex of the child, but is in constant and proportional relation with the weight, length, and biparietal diameter; that is to say, with the mass of the body. The smaller number of heart-beats more frequently corresponds to the male sex, only because boys are as a rule heavier at birth than girls. The lowest rate observed was 112, and the highest 168. The first was in a boy of 4,300 grammes weight, 51 centimètres long, with a biparietal diameter of 10·5 centimètres. The second was a girl of 2,570 grammes weight, 46 centimètres long, biparietal diameter 9·5. The two most frequent rates were 128 and 144; with the first more boys than girls corresponded, and with the second more girls. With

128 heart-beats, the weight of the child (of whatever sex) was over 2,900 grammes; with 144, the weight was always less than this. The number of the heart-beats, then, is a more constant guide to the development than to the sex of the child.

G. D'Arcy Adams, M.D.

3725. *Zweifel on the Treatment of Retro-uterine Hæmatocele.*—Whilst Professor Martin and many other authorities strongly advocate abdominal section for the removal of effused blood, whether liquid or clotted, in cases of retro-uterine hæmatocele, Dr. Zweifel is in favour of making an opening through the vagina. He is of opinion that there is considerable risk, and always high fever and severe reaction after abdominal section, especially when the sac or outer part of the collection of half-organised clot is radically removed by scraping; nor can the escape of much fluid blood into the abdominal cavity be prevented. Dr. Zweifel has seen good results follow an incision, of about three fingers' breadth, in the vagina. The sac can be sufficiently scraped away by means of a blunt curette, without any dangerous hæmorrhage. Statistics seem slightly in favour of Dr. Zweifel's opinion.

3726. *Alberts on Hæmatosalpinx.*—Dr. Alberts, of Berlin, has endeavoured, through clinical and pathological investigation, to find the true cause of the presence of blood in the Fallopian tube. From the very nature of hæmatosalpinx, he believes it must either arise from hæmorrhage from the mucous membrane of the tube, from a reflux of blood derived from the uterine cavity, or else from both these sources. The reflux theory appears, according to Dr. Alberts, to be completely refuted, in spite of former researches on dissecting-room subjects which appeared to prove it; the direction of muscular contraction of the tube during life is identical with intestinal peristalsis, and, like the migration of the ovum, is always centrifugal. From this fact, it is evident that the hæmorrhage causing hæmatosalpinx must arise within the tube itself. Dr. Alberts declares that numerous researches have proved that a physiological escape of blood from the tubal mucous membrane naturally takes place during menstruation. The diagnosis of hæmatosalpinx is difficult, when it cannot be settled by puncture or by abdominal section. Each stage of the disease is apt to be complicated by other conditions, notably by inflammatory exudations and adhesions amongst adjacent structures. The treatment must be essentially expectant, and the prognosis is, as a rule, highly favourable.

3727. *Kolisko on Malignant Psammoma of the Ovary.*—The author has observed that a distinct form of carcinoma is found in the ovary, where a process of calcareous degeneration of the epithelial elements goes on steadily, so as to form stratified laminæ of a highly characteristic type. These may be seen both in carcinomatous degeneration of papillary cystoma, and in the same change in pure papilloma of the ovary; hence the sabulous particles in malignant psammoma are genetically different from those present in ordinary psammoma. When metastasis occurs, the secondary growths may either be psammomatous cancer or simple cancer. Malignant psammoma of the ovary is generally situated between the layers of the broad ligament, and frequently bursts into the vagina. [That is to say, it either arises in the relics of the Wolffian body found in the hilum of the ovary, or in the vertical tubes of the parovarium, or in Gartner's duct. Coblenz and others have described psammomata originating from these structures. The reporter has seen psammomatous masses on the hydatid of Morgagni and on other parts of healthy uterine appendages.—*Rep.*]

Alban Doran.

3728. *Renil on a New and Constant Sign of Pregnancy in the Early Months.*—This consists in the unusual softness of the lower uterine segment; and Renil found this diagnostic sign in six cases, all in the third month of pregnancy. On examination by the rectum, the lower segment of the uterus was found so collapsible on pressure as to feel like a thin membrane only. Observations in a still earlier period were not made, as no opportunity presented itself.

E. J. Edwardes, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

3729. Schjerning.—Burns and Scalds. (*Viertelj. für Gerichtl. Med.*, Band xli., p. 273; Band xlii., p. 66.)

3730. Grange, E.—Death from Electricity. (*Ann. d'Hygiène*, 1885, tome xiii., p. 53.)

3731. Cullingworth.—A Case of Cerebral Hæmorrhage. (*Med. Chron.*, vol. i., p. 118.)

3732. Calmels.—Batrachian Poisons. (*Compt. Rend.*, tome xlviii. p. 536.)

3733. Raymond, P.—Chronic Mercurial Poisoning. (*Progrès Méd.*, 1884, p. 1017.)

3734. Hare, H. A.—Nitrite of Amyl as an Antidote in Strychnia Poisoning. (*Boston Med. and Surg. Jour.*, vol. cxi., p. 481.)

Art. 3729. *Schjerning on Scalds and Burns.*—Dr. Schjerning (*Viertelj. für Gerichtl. Med.*, Band xli., p. 273; Band xlii., p. 66) has done good work by systematically collating the *post mortem* experiences met with in a great number of cases of death from burns and scalds, under the heads of external lesions, lesions of the circulatory organs, of the respiratory organs, of the abdominal organs, and of the brain and cord respectively. This elaborate monograph is accompanied with a copious bibliography.

3730. *Grange on Death from Electricity.*—Dr. E. Grange (*Ann. d'Hygiène*, 1885, tome xiii., p. 53) discusses the accidents resulting from the industrial applications of electricity and the means for their prevention, and gives interesting details of the necropsies on the bodies of two young men who were killed in Paris in 1882 by coming into contact with the conductors from a Siemens machine, with alternate currents, working twelve lamps, with a difference of potential of 500 volts between the two wires, or a difference of potential probably of 250 volts between the one wire and the air or earth. The first body was that of a man 29 years of age. The examination was made in August, sixty-two hours after death, the body having been kept in a refrigerating chamber. Putrefaction had not commenced; *rigor mortis* was pronounced; the shoulders and upper part of the body exhibited a rosy tint like that seen in asphyxia by charcoal fumes; and also an abundance of minute punctated ecchymoses, chiefly on both sides of the thorax and the upper arm. On the face and neck was an irregular sinuous slate-grey furrow, ten inches in length and about an inch in width, extending from near the left ala of the nose, downwards and backwards over the angle of the jaw, with a double border of white and red zigzag lines. There was no swelling or effusion about the furrow. A little higher up was a second smaller and narrower furrow five inches long, and coloured similarly to the other, but without the red and white borders. On the left hand, at the point of articulation of the metacarpus with the first phalanx of the little finger, was a small grey erosion; and there was a similar erosion on the middle of the palmar surface of the first phalanx of the ring finger. These erosions were formed by an elevation of the epidermis, which was grey and easily detached. At the back of the right elbow, and also on the root of the nose, were small parchmented spots. Under the hairy scalp, over the left temporal protuberance, was a large effusion of blood; and behind the right temporal protuberance were also some ecchymoses. There was no fracture of the cranium. The brain was not congested; but the surface of the convolutions was soft and adherent to the meninges, so that the brain could not be exposed without removing an appreciable quantity of cerebral substance. The lungs were congested and crepitant. The heart was filled with bright vermilion-coloured blood, readily acquiring a venous hue with reducing agents. The pericardium exhibited some minute ecchymoses. The aorta was filled with liquid blood. From these data the author drew the conclusion, that death was the result of an electric discharge giving rise to convulsions, due to lesion of the medulla oblongata. The other victim was a muscular man, whose age is not stated. The face was pallid, and the ears greatly congested and marbled with black spots, which were also disseminated over the whole body; these were not *post mortem* lividities. Well-marked *rigor mortis* persisted till thirty hours after death. There was no solution of the continuity of the skin, and the only other superficial lesions noted were five traces of burning on the left hand, and six on the right hand, differently disposed. These marks were white and dry, and did not extend beyond the dermis. Internally, the lungs were gorged with dark blood, which became red on exposure to the air. The heart was quite empty of blood. The right ventricle was flaccid, the left remarkably firm, as if the organ had ceased to beat whilst in the state of systole. There were no clots in either pulmonary artery or aorta. The brain was much congested peripherically, and a large quantity of blood escaped on opening the sinuses. The pia mater was hyperæmic. There was no extravasation of blood, and the ventricles were empty. It was concluded in this case that death resulted from arrest of the heart's action due to violent excitation of the pneumogastric nerve.

3731. *Cullingworth on Cerebral Hæmorrhage.*—Dr. C. J. Cullingworth (*Med. Chron.*, vol. i., p. 118) places on record a most instructive case of cerebral hæmorrhage, the subject of a trial at the Lancashire Summer Assizes, 1884. A man struck his father a blow upon the occiput with a hammer, inflicting a scalp-wound, with no symptoms of cerebral injury, his avowed intention being to kill his father. As the injury was apparently not serious, the assailant was simply sentenced to two months' imprisonment, a punishment which the father, a drunkard, considered inadequate. Hereupon the father became greatly excited, hemiplegic six days after the infliction of the blow, and he died comatose three days later. At the necropsy, the occipital bone was found indented at the seat of the blow, and there was a depressed fracture of the inner table of the skull at a point corresponding to the external injury. There was no effusion of blood on the surface of the brain or in the neighbourhood of the injury, but a large clot was found in the lateral ventricle. Under these circumstances, Dr. R. C. Smith and his son very properly gave it as their opinion that the immediate cause of death was apoplexy, and that there was nothing in the history of the case, or in the appearances presented after death, which would justify them in stating that the effusion of blood, or, in other words, the man's death, was caused by the injury, and the prisoner was acquitted.

3732. *Calmels on Batrachian Poisons.*—G. Calmels (*Compt. Rend.*, tome xlviii., p. 536) has investigated the poisons of toads, salamanders, and other batrachians from a chemical point of view. The poison of toads contains a small quantity of methyl carbamine, $CN.CH_3$, to which it owes its odour and toxic properties. It also contains isocyanacetic acid, $CN.CH_2.COOH$, a substance which has a peculiar odour and a loathsome irritant flavour. In the crested salamander a corresponding acid is found, first observed by Zalewski in the land salamander, and afterwards by Joyeux-Laffine in the scorpion. Under the microscope, the poison is seen in the form of globules like the fat-globules of milk, and these are furnished with an albuminous envelope, which is ruptured by water. Calmels terms this compound pseudo-lecithin, and regards it as a mixture of albuminoids. The poison of the salamander contains no free carbylamine. The decompositions, however, of the salamander poison show it to be an isocyanpropionic acid, $CH_3.CH.CN.COOH$. The physiological properties which Vulpian assigns to the salamander poison, and Paul Bert to the scorpion poison, the author ascribes to amylcarbamine. Methyl carbamine is very poisonous to guinea-pigs.

3733. *Raymond on Chronic Mercurial Poisoning.*—Dr. P. Raymond (*Le Progrès Méd.*, 1884, p 1017) has investigated the effects upon workers in mercury of this metal by observation at the celebrated mines of Almoden, in Spain, during the summer months. It is stated that the extra hands employed for three hours a day during the winter months rarely suffer any ill effects, an observation in accordance with the fact that mercury is volatile to an appreciable extent only at a winter temperature. There are great differences as to susceptibility in the regular miners, some being affected after a few weeks' labour in the mines; whilst others work for twenty years or more without injury to health. Habit and personal hygiene, as well perhaps as idiosyncrasy, are concerned in bringing about these differences. Stomatitis is a common affection, and yields readily to prompt treatment; when neglected, however, it passes on into profuse salivation, ulceration, and loosening of the teeth. Sometimes tremor is the earliest symptom, the upper limbs being first affected; next the lower limbs; and then there are twitchings of the muscles of the face and neck. The tremor is aggravated by voluntary exertion. Sometimes they are very violent; or they may be confined to groups of muscles. Arthritic and muscular pains are occasionally severe, with muscular power and sensibility unaffected. Paralysis is rare, and more commonly affects the lower than the upper limbs. Cachexia may be extreme; and the patients are very susceptible to alterations of temperature. Skin-diseases are rare. Albuminuria, nervous disorders beyond those above specified, and osseous and hepatic disorders (which have been attributed to mercury) were not observed to occur. The treatment most in vogue is chlorate of potash internally, acid gargles, and tonics. The tremors are usually treated by faradisation, and the use of bromide of potassium.

3734. *Hare on Nitrite of Amyl as an Antidote in Strychnia Poisoning.*—Dr. H. A. Hare (*Boston Med. and Surg. Jour.*, vol. cxi., p. 481) has reinvestigated the action of nitrite of amyl, and has arrived at the following conclusions, which are somewhat different from those previously reached by Dr. St. Clair Gray. 1. Nitrite of amyl does prolong life in strychnia poisoning, although its action is so fleeting, compared to that of its adversary, that it can only be used to tide over the patient until more persistent remedies or antidotes, such as potassium bromide or chloral, can be administered. 2. It cannot be used by inhalation as an antidote with any chance of security from a fatal termination, owing to the fact that a convulsion may supervene during expiration. 3. The longer the nitrite is given after the strychnia the less good it will do, provided the strychnia has already shown itself by convulsions or otherwise. This is true, not because the nitrite is less powerful after the first convulsions, but because death is more apt to supervene before the nitrite can fully act. 4. The nitrite has to be given in such quantities and at such times that its full physiological action may be present constantly; otherwise, in the instant which may supervene between the effects of one dose and the beginning of the next, the patient may die. 5. In cases of strychnia poisoning, the nitrite of amyl being used as an antidote, an injection of the nitrite should be given, and the patient kept moderately under its influence by inhalations until other remedies are obtainable. Incidentally, Dr. Hare remarks that many deaths are recorded in man from one-quarter to one-half grain doses of the alkaloid.

THOS. STEVENSON, M.D.

MEDICAL CHEMISTRY.

RECENT PAPERS.

3735. TSCHIRWINSKY.—The Formation of Fat from Carbo-hydrates. (*Bied. Centr.*, 1884.)

3736. EYMOUNET.—The Elimination of Hypophosphites in the Urine. (*Jour. Pharm.*)

3737. MÉHU.—Extraction of Indigotin and Indirubin from Urine. (*Jour. Pharm.*)

3738. HAYEM.—The Action of certain Poisons and Drugs on Hæmoglobin, particularly those Converting it into Methæmoglobin. (*Comptes Rendus*, tome xcviii.)

3739. KÜHNE AND CHITTENDEN. — Decomposition Products of Albumen. (*Zeitschr. für Biol.*, Band xix.)

3740. KÜHNE.—Hemialbumose in Urine. (*Zeitschr. für Biol.*, Band xix.)

ART. 3735. *Tschirwinsky and Others on the Formation of Fat from Carbo-hydrates.*—The experiments (*Bied. Centr.*, 1884) were made on pigs, two young pigs of a litter being taken, one of which was killed and analysed, and the other fed for four months. The amount of nitrogenous matter and fat in the food was known, and estimates made from analyses of the fæces, &c., as to the amounts of these digested. The second pig was then killed and analysed, and it was found there was much newly formed fat to be accounted for: the albuminous matter was not sufficient to form it. The same results were obtained in other experiments. It follows, therefore, that the carbo-hydrates take part in the formation of fat. In the experiments of Meissl and Strohmer on similar animals, the total amount of nitrogenous matter and fat given in the food was estimated, as also the amounts discharged in the excreta and respired air. The experiment was continued over seven days, and barley-meal and rice were given. The results may be thus stated in grammes.

	Carbon.	Nitrogen.
Consumed	756·37	18·67
Excreted	476·15	12·59
Assimilated	289·22	6·08

According to these authors, the fat seems to be derived from three sources: 7·9 grammes daily from the food by direct absorption, 33·6 grammes from the nitrogenous matter in the body, and 310·3 grammes from carbo-hydrates. Accordingly, their opinion is that seven or eight times as much fat has its origin from the carbo-hydrates as from all the other sources combined. Some experiments, however, recently made by J. Munk (*Bied. Centr.*, 1884), would tend to show that a larger proportion of the fat of the body is derived from the food directly. A dog was fed for fourteen days, after having been starved for nineteen days, on 3,200 grammes of flesh and 2,850 grammes of the acids obtained from mutton-suet. The animal was then killed, and much fat was found deposited, 96 per cent. of which was ordinary suet. Now, as the ordinary albuminoids in the food would have formed dog-fat, the suet-fat found in the dog could not have had this origin.

3736. *Eymounet on the Elimination of Hypophosphites in the Urine.*—According to Eymounet (*Jour. Pharm.*), when sodic hypophosphite is injected into the veins of dogs, and the total phosphates and unaltered hypophosphite are estimated in the urine, it is found that the total elimination is completed in about twenty-four hours. Part of the hypophosphite appears in the urine unaltered, and part as phosphate, the quantity oxidised appearing to increase in proportion to the dose of the hypophosphite.

3737. *Méhu on the Extraction of Indigotin and Indirubin from Urine.*—A. Méhu (*Jour. Pharm.*) describes the following process. The urine is strongly acidified with sulphuric acid (1 gramme of acid to each kilogramme of urine), and then saturated with anhydrous ammonic sulphate. The indigotin and indirubin are thus precipitated. By the action of alcohol (50 per cent.) the indirubin may be separated from the indigotin. By washing in water and subsequent drying, the insoluble indigotin is purified; it is soluble in hot phenol, the greater part, however, separating in crystals when the liquid cools. Colorimetrically, an approximative estimation of indigotin may be made; a standard solution of this pigment in phenol, to which alcohol or glycerin has been added, being used. Boiling creasote is a good solvent of indigotin, crystals being deposited on cooling; other solvents of the body are oils of bitter almonds, turpentine, gaultheria, and rosemary, also amyl alcohol.

3738. *Hayem on the Action of Certain Poisons and Drugs on Hæmoglobin, particularly those Con* *verting it into Methæmoglobin.*—According to G. Hayem (*Comptes Rendus*, tome xcviii.), dissolved hæmoglobin is greatly more sensitive than the hæmoglobin existing in the corpuscles to the action of such bodies as amyl nitrite, potassic ferrocyanide, and sodic nitrite, which can convert it into methæmoglobin; further, the change is of a more permanent character in the case of dissolved hæmoglobin than in that of the corpuscular hæmoglobin, for the latter soon resumes its original condition. Whilst amyl nitrite, which does not destroy the corpuscles, produces no sensible anæmia, bodies like sodic nitrite, which do tend to destroy the corpuscles, cause somewhat rapid anæmia. This resistance of the corpuscular hæmoglobin explains why some of these substances can be introduced into the blood, even in considerable quantity, without producing any sensible effect upon it.

3739. *Kühne and Chittenden on the Decomposition Products of Albumin.*—W. Kühne (*Zeit. für Biol.*, Band xix.) regards the albumin molecule as composed of antialbumid and hemialbumin, which are converted by peptic digestion into their corresponding peptones, intermediate between them being antialbumose and hemialbumose respectively. These intermediate bodies are also produced by the action of weak acids, and under the influence of trypsin the hemipeptone is nearly all broken down into leucin and tyrosin, while the antipeptone resists this decomposition.

These are the analyses of the chief bodies :—

	Anti-albumid.	Anti-pepton.	Hemi-albumose.	Hemi-pepton.
Carbon......	53·79	49·87	50·96	49·38
Hydrogen..	7·08	6·89	6·85	6·81
Nitrogen ...	14·55	15·21	15·88	15·07
Sulphur	24·58	28·03	1·45	1·10
Oxygen			24·86	27·64

By heating coagulated egg-albumin for a long time in 0·5 per cent. sulphuric acid, then washing the undissolved residue with water and digesting it with pepsin, a jelly-like body is obtained; this *antialbumid* is next digested with trypsin in an alkaline medium, and the resulting *antipepton* may be precipitated from the solution by alcohol. No leucin or tyrosin appear even after prolonged digestion. Antialbumose can only be prepared by fractional peptic digestion. By the action of a peptic fluid for a short time on coagulated egg-albumin, *hemialbumose* and *hemipepton* are best prepared. When the solution thus obtained is evaporated down, these two bodies can be precipitated by alcohol, and, by subsequently extracting with cold water, they can be separated.

3740. *Kühne on Hemialbumose in Urine.*—W. Kühne (*Zeit. für Biol.*, Band xix.) examined the urine of a patient suffering from osteomalacia. The reactions described by Bence Jones were obtained. To this albumin the author gives the name hemialbumose. A sediment of urates and of amorphous hemialbumose rapidly separated from the urine when passed, and it is possible that the urine was rich in the hemialbumose when it left the bladder, but deposited it on cooling. The urine was precipitated daily for several weeks with alcohol, and the precipitate dried. Too much sodic chloride or ferrocyanide prevents the precipitation by acetic acid and potassic ferrocyanide, while excess of sodic chloride and acetic acid gives a precipitate which dissolves when the sodic chloride is removed. The pure hemialbumose contains 0·31 to 1·28 per cent. of ash, and in the substance free from ash, C, 52·13; H, 6·83; N, 16·55; P, 0·19; S, 1·09. The pure hemialbumose obtained by alcoholic precipitation, dissolving the precipitate in water, and coagulating by warming the solution, has these properties; when digested with pepsin, pepton only is formed; when it was digested with trypsin in a ½ to 1 per cent. solution of sodic carbonate, pepton and large quantities of leucin and tyrosin were found after six days; when it was boiled with sulphuric acid, leucin and tyrosin were also produced, and indol when it was heated with potash.

T. Cranstoun Charles, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

3741. Pitres.—Crises of Muscular Stiffness at the commencement of Locomotor Ataxy. (*Le Progrès Méd.*, No. 28, 1883.)

3742. Fiorani, Prof. G.—Consequences of Extirpation of the Thyroid Body. (*Arch. Ital. per le Mal. Nerv.*, Fasc. iii. and iv., 1884; and *Gazz. Med. Ital. Lomb.*, July 19, 1884.)

3743. De Renzi.—Hypnotism. (*Riv. Clin.*, Aug. 1884.)

3744. Turner, H. T.—On a Case of Obstinate Neuralgia of the Ulnar Nerve Cured by Injection of Perosmic Acid. (*Vratch*, No. 24, 1884, p. 397.)

3745. Bianchi, L.—A Case of Porencephalus. (*La Psichiatria*, Fasc. ii., 1884.)

3746. Musso.—The Variations in the Diameter of the Pupil in Epileptics. (*Riv. Sper. di Fren.*, Fasc. i. and ii., 1884).

3747. Küpper.—Epileptic Fits from a Foreign Body in the Ear. (*Centralbl. für die gesam. Ther.*, April.)

Art. 3741. *Pitres on Crises of Muscular Stiffness at the commencement of Locomotor Ataxy.*—Prof. Pitres (*Le Progrès Méd.*, No. 28, 1884) relates three cases in which weariness and sudden fatigue, and pain in the muscles of the limbs and loins, preceded the development of the characteristic symptoms of locomotor ataxy. He thinks these symptoms differ from those of ordinary physiological fatigue by their abrupt onset, the absence of any previous exertion, and their rapid disappearance after a relatively short time, and the complete integrity of the muscular sensibility during the intervals. He regards them as the clinical equivalents of the other crises affecting the stomach, intestine, kidney, bladder, &c., which supervene frequently at the beginning or during the course of locomotor ataxy, and which often permit a diagnosis to be made before any inco-ordination of movements or lightning pains in the legs have appeared.

Robert Saundby, M.D.

3742. *Fiorani on the Consequences of Extirpation of the Thyroid Body.*—Extirpation of goître, lately largely practised, especially in Switzerland and Germany, though fortunately not always followed by the same consequences, proves that there is a cretinism or acquired idiocy due to the total extirpation of the goître, when this has been performed during the period of development of the individual, that is, between five and twenty years. Even in adults who have undergone partial extirpation of the goître, there are noticed muscular weakness, swelling of the face and other parts, feeling of coldness of the body which is not easily kept warm, and torpor of the intellectual faculties, although in a lesser degree. The apathy of the physiognomy is especially noticeable. The integrity then of the thyroid is of great importance, since the body and intelligence are developed normally in youth and are preserved in adult age. The frequent alteration of the thyroid in cretins shows also a certain correspondence between the functions of the cerebral hemispheres and those of the thyroid. Extirpation of the thyroid should be limited to cases of cancerous degeneration. Prof. Fiorani, however, read a paper before the *Reale Istituto Lombardo di Scienze e Lettere* on June 5, in which he gives five cases of more or less complete removal of the thyroid body in young persons, the results of which do not justify the fears of German and Swiss surgeons. Of the five cases, one belongs to Dr. Piccinelli, the patient being a girl of 19; the operation was performed in January 1882. In another, Professor Minich operated in September 1881. The other three operations were performed by the author with the elastic ligature; the first was in a girl aged 20, in August 1882; the second, a boy aged 16, January 1881; the third, a girl aged 23, in May 1880. In neither of these cases was there any alteration of the mental faculties of the patient.

3743. *De Renzi on Hypnotism.*—The author has obtained rapid and decisive results with hypnotism in four cases of idiopathic hemichorea, and in one case of common chorea. A small laryngoscopic mirror was used; this was placed in front of the patients, at the distance of 10 to 30 centimètres, the eyes being thus kept in a state of convergent superior strabismus. During the hypnotic sleep the choreic movements entirely disappeared, and, after the hypnotism had ceased, sensibility and motility were found altered, the hemianæsthesia and hemiparesis being notably diminished. The choreic movement also, after one or more applications, diminished, and quickly disappeared. De Renzi believes that in chorea and hemichorea the seat of the disease is in the brain. In his four cases of hemichorea, on the side affected there was paresis or weakness in the muscular contractions; and ordinarily loss of dolorific and tactile sensibility is observed, the latter being most influenced, also loss of the special senses (amblyopia, cophosis, loss of taste and smell). The calibre of the vessels is also diminished, so that punctures bleed less than on the sound side, and from the diminished vascularity the surface-temperature is lower. G. D'Arcy Adams, M.D.

3744. *Turner on Neuralgia of the Ulnar Nerve Cured by Subcutaneous Injection of Perosmic Acid.*—Dr. H. T. Turner, of St. Petersburg, details (*Vratch*, No. 24, 1884), the case of a girl, aged 21, who had during five and a half years suffered from an extremely obstinate neuralgia of the left ulnar nerve, of traumatic origin, and had been more or less unsuccessfully treated by iodine painting, baths, faradisation, galvanisation, and massage. She never was free from pain, and her sleep was disturbed. On examination, the whole left upper extremity was found to be somewhat smaller than the right. The two outer fingers were markedly colder than the remaining, and were clonically twitched every time when the ulnar nerve was handled. The latter was tender and considerably thickened. The author decided to try Neuber's plan of subcutaneous injections of perosmic acid. Two or three drops of a one per cent. solution of perosmic acid in distilled water were injected over the region of the ulnar nerve, at first daily, then every other day, or every third day. After the first injection pain completely disappeared for six hours; then it reappeared, but in a considerably lesser degree. After twenty injections, in two months, the patient was cured. The left ulnar nerve now was found almost of the same size as the right. The injections were always followed by strong burning pain, lasting from half an hour to one hour, but no other disagreeable effects were observed. The spots of injections were marked by a greenish yellow discoloration.

V. Idelson, M.D.

3745. *Bianchi on Porencephalus.*—Professor L. Bianchi, of Naples, records an interesting case of this affection. The patient was 73 years old when he died. He was paralysed from infancy on the right side. He had heard his mother say that the paralysis followed an attack of convulsions. The convulsions did not recur. The right side was completely paralysed except the face, which did not present any asymmetry during either repose or motion. The left upper extremity looked even more developed than normal. The right upper extremity was considerably diminished in size, semiflexed, and rigid; the hand was also flexed, and the fingers extended. The right lower extremity, though equally paralysed and semiflexed, differed but little in volume from its fellow. Tactile sensibility was obtuse; sensibility to pain and that to heat were only slightly less than on the opposite side. Knee-jerk was normal, or perhaps a trifle greater on the paralysed side. The special senses were normal. There was no disturbance whatever of speech. Intelligence was somewhat defective. The cranium was quite symmetrical. The entire brain without the membranes weighed 960 grammes; the left hemisphere, 380; the right hemisphere, 436; and the cerebellum and mesocephalon, 145. In the left hemisphere, the ascending parietal convolution and all but the foot of the ascending frontal convolution were completely absent, and their place occupied by a deep fissure extending from the calloso-marginal sulcus to the fissure of Sylvius. Two minute eminences at the upper extremity of the fissure suggested the idea of rudimentary convolutions. The surrounding convolutions radiated towards the fissure, and curved at once into the lateral ventricle, which was continuous with the fissure. In the right hemisphere was a similar but smaller defect. On the right side the upper third only of the two central (ascending frontal and ascending parietal) convolutions was replaced by a fissure communicating with the lateral ventricle by an aperture, into which the point of the little finger could be inserted. The lower two thirds of these convolutions were particularly well developed. On the left side, the head of the caudate nucleus was large; the tail opposite the fissure was greatly thinned as it curved down into the inferior cornu of the ventricles. The third segment of the lenticular nucleus was absent. The optic thalamus was very small. The internal capsule was very narrow, especially in its posterior segment; and in some points the optic thalamus and lenticular nucleus were in direct contact. The left cerebral peduncle was much smaller than the right; but did not present any evidence of degeneration. The left half of the pons Varolii was also the smaller. The condition of the medulla oblongata was remarkable. On the one hand, the left inferior cerebellar peduncle was much better marked than the right; on the other hand, the left pyramidal body was almost absent, so that the olivary body almost bordered the raphe, whilst the right pyramid was well developed. In the spinal cord, on the right side the postero-lateral segment, including the grey matter, was much smaller than on the left. The histological examination did not reveal any appearance of degeneration; and Prof. Bianchi considered the condition due to arrest of development. The author, after giving a short account of previous writers on the subject, with bibliographical references, discusses the nature of the affection. Two varieties are distinguished. One variety is hydrocephalic; the other, devoid of hydrocephalic characters, is probably due either to arrest of development or to an intra-uterine destructive process. Apart from these conditions there is what Prof. Bizzozero calls cerebral porosis, due, not to dilatations of the blood-vessels as formerly held, but to dilatation of the lymphatic spaces about the vessels. Attention is drawn to the circumstance that, in all the cases hitherto published, the upper extremity was affected either exclusively or much more than the lower extremity. In the case now recorded the absence of any functional defect on the left side, to correspond with the structural defect in the right hemisphere, is ascribed by Dr. Bianchi to the compensatory action of the adjacent convolutions.

3746. *Musso on the Size of the Pupil in Epileptics.* According to Dr. Landon Carter Gray, the pupils of epileptics are habitually larger than the pupils of healthy persons. Marie observes that the pupils of epileptics are sometimes found to differ in size. It is asserted by Gray and also by Moëli that the pupils of epileptics react more quickly to light and to pain than do the pupils of the healthy. The contradictory opinions expressed on these points by various authors led Dr. Musso to investigate the subject afresh. The conclusions reached are the following. 1. The pupils of the epileptic do not present any greater dilatation than do the pupils of healthy persons. 2. Frequently (in 22·8 per cent.) there occurs in the epileptic a difference in the size of the two pupils, and this difference appears to be somewhat more frequent in the psychical than the classical form. 3. In some epileptics the attacks are preceded by inequality of the pupils, which disappears after the attacks. 4. Although in some epileptics the pupil reacts more quickly and more readily than in health, this character is neither so constant nor so frequent as to be of value in diagnosis. Dr. Musso's investigations appear to have been made with great care. The observations were carried out on 70 epileptics (60 men and 10 women), and, for the sake of comparison, on 10 perfectly healthy persons.

WILLIAM R. HUGGARD, M.D.

3747. *Küpper on Epileptic Fits from a Foreign Body in the Ear.*—The *Centralbl. für die gesam. Ther.* for April reports a case under the care of Dr. Küpper, of Elberfeld, in which epileptic fits resulted from the presence of a foreign body in the ear. A girl, aged 18, suffered from pain and suppuration in the right ear; and, three weeks after its commencement, as she was probing the ear with a piece of twig, it slipped from her grasp, and she could not regain it. From that time she became subject to fits, which came on several times a day, in the course of which she fell unconscious to the ground, struggled so violently that it required several people to hold her, and awoke completely exhausted. After three weeks she was admitted to the hospital, when all the organs were found to be normal, with the exception of the right ear, which was full of polypoid growths, and was very sensitive to touch. The polypi were removed under an anæsthetic; and on the following day the foreign body, a piece of wood, about one-third of an inch long and one-eighth of an inch thick, was seen and extracted. Only two fits occurred after its removal, and in four weeks the patient was discharged. Two years afterwards there had been no return of the epilepsy, and the hearing was almost normal. In another case, communicated by the same author, a mass of epidermis in the external ear caused symptoms of cerebral irritation, headache, dizziness, vomiting, and convulsions of the facial and other muscles, which all ceased on the removal of the cause.

ALICE KER, M.D.

REVIEWS.

ARTICLE 3748.

A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., F.R.C.P. Two vols. Fifth Edition. London: Smith, Elder, & Co. 1884.

WHEN a work has reached a fifth edition, it needs but little commendation from us to enhance its popularity. In reviewing the first edition, eight years ago, we predicted a large sale, and our predictions have been more than verified. Comparatively few authors have the gratification of publishing so many editions in so short a space of time, or of having influenced so largely the improvements in the modern practice of obstetrics as contrasted with the older methods.

Starting originally with the object of placing in the hands of his readers an epitome of the science and practice of midwifery, which embodied all recent advances, the author has followed up this praiseworthy attempt by subjecting the work to a careful revision.

The illustrations unquestionably add materially to the value of the work, by facilitating the student's comprehension of the text. The description of turning, or the application of forceps, may be cited as an instance of this.

The chapter on conception and generation has been, in great part, rewritten, Dr. W. Tyrrell Brooks having rendered valuable assistance in making this intricate subject both interesting and intelligible to the student.

We do not propose to criticise *seriatim* the author's views. Although in certain important points he has recommended practice which not long ago would have been considered heterodox in the extreme, and which, even now, will not meet with general approval, still, we feel sure, the views enunciated will stand the test of time; and though practitioners of the old school may regard some of the author's suggestions as inclining to the 'meddlesome midwifery' line of practice, the student of the present day will not fail to appreciate the advantage of rendering timely help when really needed.

The teaching of Dr. Robert Barnes has done much to improve our knowledge of operative midwifery, a most important step towards a more intelligent practice, and Dr. Playfair follows up and endorses this teaching most thoroughly. In place of 'allowing patients to drag on in many weary hours of labour, at the expense of great exhaustion to themselves and imminent risk to their offspring,' modern experience demands, and our author strongly recommends, the timely application of forceps, or such other method of assistance as may be indicated in the individual cases. Instead of waiting any stated number of hours before rendering assistance, in cases of difficult or protracted labour, 'it is now recognised as an axiom by the most experienced teachers that, when we are once convinced that the natural efforts are failing, and are unlikely to effect delivery, except at the cost of long delay, it is far better to interfere soon rather than late, and thus prevent the occurrence of the serious symptoms accompanying protracted labour.'

The chapters on diseases of pregnancy are most exhaustive, and contain many valuable hints as to treatment. The author dissents entirely from Dr. Graily Hewitt's theory as to the importance of anteflexion of the uterus in explaining the sickness of pregnancy.

Albuminuria is shown to be often associated with grave disease, such as certain forms of paralysis, either of special nerves, as puerperal amaurosis, or of the spinal system; cephalalgia and dizziness, puerperal mania, and possibly hæmorrhage. Although the presence of albumen in the urine of pregnant women is far from a rare phenomenon, it rapidly disappears, in the large majority of cases, after delivery. It is obvious, therefore, that its presence must, in a large proportion of cases, depend on temporary causes.

The advantages of examining with the left instead of the right hand, in cases of labour, are not mentioned, although practically it will be found to be far more convenient and satisfactory.

In speaking of the administration of chloroform in labour, the author very properly insists upon its being intermittent and not continuous, so that the higher degree of anæsthesia should never be produced. In cases in which chloroform has lessened the force of the pains, ether may be given instead with great advantage; it has not the property of relaxing the uterus, and has sometimes seemed to distinctly intensify the pains. The author has of late employed a mixture of one part of absolute alcohol, two of chloroform, and three of ether.

In cases of difficult labour, necessitating operative interference, of course the above remarks do not apply. It is then of the greatest assistance to have the patient completely under the influence of an anæsthetic to the surgical degree. This should always be entrusted to another, and never undertaken by the operator himself.

The directions for the application of forceps cannot fail to be understood by the merest tyro, who will doubtless feel pleased to learn that, although it is of importance that the precise position of the head in the pelvis should be ascertained, in order that we may have an intelligent notion of its progress, it is not essential as a guide to the introduction of the forceps. It is a needless element of complexity to endeavour to vary the position of the blades in each case; it only confuses the inexperienced practitioner, and renders more difficult an operation which should be simplified as much as possible. Dr. R. Barnes points out with great force that, do what we will, and attempt as we may, to pass the blades in relation to the child's head, they find their way to the sides of the pelvis.

The advantages of Porro's operation, the body of the uterus being excised, after removal of the fœtus through an incision in the uterine wall, as contrasted with the older method of Cæsarean section, where a gaping wound is left, with all the attendant risks of hæmorrhage and septic mischief, are fully stated. The mortality is about one-half in the case of Porro's operation, only about one-sixth in Cæsarean section.

The author's well-known views on puerperal septicæmia are given at length, and the different theories as to the nature of the so-called puerperal fever are criticised.

The necessity of extreme and even exaggerated care in the employment of antiseptics is strongly urged. The danger consists chiefly in not recognising the possible risk, and in neglecting the use of proper precautions, where the practitioner has been brought into contact with septic matter in any form, in a patient suffering from either puerperal septicæmia, zymotic disease, or offensive discharges. The various methods of treatment are fully given, and the importance of lessening the pace of the circulation and diminishing the temperature is clearly insisted on.

. The work, as a whole, is one that does great credit to its author. It may be fairly considered as one of the best exponents of the system of midwifery published during the present century. The views expressed are those of nearly all the advanced workers of the present day, and represent fairly the teaching of British obstetricians.

The student, as well as the practitioner, may safely take the work as a practical guide to the science and practice of midwifery. ARTHUR W. EDIS, M.D.

ARTICLE 3749.

A Text-book of Human Physiology, including Histology and Microscopical Anatomy; with special reference to the requirements of *Practical Medicine*. By Dr. L. LANDOIS, Professor of Physiology and Director of the Physiological Institute, University of Greifswald. Translated from the Fourth German Edition, with additions, by WILLIAM STIRLING, M.D., Sc.D., Regius Professor of the Institutes of Medicine or Physiology in the University of Aberdeen. Vol. I. London: C. Griffin & Co. 1885.

THERE may be a difference of opinion amongst the physiologists of to-day as to whether it be or be not expedient to consider Physiology as a separate science, quite independent of and apart from Medicine and Pathology. The tendency appears to be—at present, at any rate—in the former direction; and the outcome of such a tendency is a book like that of Michael Foster. At the same time, however, not a small minority—considering the wants and the time at the disposal of the medical student—still holds with the close connection of physiology with pathology, and their almost inseparable relationship. The book of Professor Landois—the first volume of the translation of which is now before us—may be taken to represent the views of this latter school. In it we find placed side by side, as it were, physiology and pathology—health and disease; and however upon the main principle physiologists may differ, there will be, we venture to think, no difference of opinion upon this point, namely, the excellent manner in which the writer of the book has carried out his ideas, whether right or wrong, of associating together in the same text-book human physiology and practical medicine, and of making the former the basis of the latter. This object is effected in two ways: firstly, by inserting at the end of each section treating of physiology proper a short summary of the way in which the natural functions may be disturbed and altered under morbid conditions; and secondly, by describing all the methods of investigation which may with advantage be used by the medical practitioner.

In the preface to his translation, Professor Stirling points out the two advantages of such a system: firstly, that the student's attention is directed from the outset of his career to the field of his future practice, and that he is shown to what extent pathological processes are due to a disturbance of the normal activities; and secondly, that the busy practitioner is enabled at once to refresh his memory on the theoretical aspects of medicine, by passing backwards from pathology to physiology, and by so doing to find 'new indications and new lights for the appreciation and treatment of the cases under consideration.'

In the present volume, the following subjects are considered. First of all, an Introduction treats of the general scope of physiology, with other preliminary matter; the forces at work in the body, the law of the conservation of energy, the differences between plants and animals, vital energy and life.

In the first division or section of the volume, of which sections there are altogether seven, we have a very detailed account of the Physiology of the Blood, which, with the many additions of the translator, makes a very complete account of the whole subject. We may mention, for the sake of example, the account of the description given by the translator of the corpuscles of Bizzozero, greatly augmented from the original, and explained by a series of excellent drawings. A short account of the spectroscope introduces the subject of the spectrum and composition of hæmoglobin, its compounds and derivatives. In the account of the coagulation of the blood, of the formation of fibrin, and of the sources of the fibrin-factors, the author, to a considerable extent, follows A. Schmidt; other views have been added by Dr. Stirling. The condition of the blood in disease is very fully discussed.

Section II. is concerned with the Physiology of the Circulation. After a description of the heart, its structure, the arrangement of its muscular fibres, its covering and lining, and its valves, its movements are then discussed at length, and the text is here illustrated by a drawing of a plaster cast of the ventricles. The causes of the impulse are also given at length, and C. Ludwig's diagrams, illustrating his views, are inserted. Five causes of the impulse are enumerated, of which the first three are said to be the chief. 1. The base of the heart (auriculo-ventricular groove) represents during diastole a transversely placed ellipse, while during contraction it has a more circular figure. Thus the long diameter of the ellipse is diminished in the cat from 28 to 22·5 mm., the small diameter is increased ($\frac{1}{10}$ to $\frac{1}{4}$) while the base is brought nearer the chest-wall. . . . The base of the heart being hardened during systole and brought nearer to the chest-wall, allows the apex to execute the movement which causes the impulse. 2. During relaxation, the ventricle lies with its apex obliquely downwards, and with its long axis in an oblique direction represents a regular cone with its axis at right angles to its base. Hence the apex must be erected from below and behind, forward and upwards, and when hardened during systole presses itself into the intercostal space. (Does this mean the so-called 'tilting forwards' of the apex?) 3. The slight spiral twisting of the ventricle on the long axis during systole, so that the apex is brought from behind more forward, and thus a greater portion of the left ventricle is turned to the front. 4. The 'reaction impulse,' or the movement which the ventricles are said to undergo at the moment when the blood is discharged into the aorta and pulmonary artery, whereby the apex goes in the opposite direction, *i.e.* downwards and slightly outwards. 5. The elongation (slight) of the aorta and pulmonary artery when the blood is discharged into them in consequence of their increased tension. The sounds of the heart and their variation; the innervation of the heart; the action of fluids on the heart, including an account of Roy's tonometer; cardio-pneumatic movement, with an account of Landois' cardio-pneumograph, occupy the succeeding subsections. A very excellent diagram of an apparatus, showing the influence of respiration on the heart, is also given. In the next division we notice a very complete account of the pulse in health and disease, and of many sphygmographs of different kinds.

After the circulation, the Blood-glands are treated of, and then follows the chapter on Respiration. In both these chapters a very marked feature consists in the full description of all the instruments used in the investigation of the subject, and in the explanation of the tracings obtained in all cases by their use.

In the Physiology of Digestion, some of the most interesting paragraphs relate to the fermentation processes in the intestine, and to the pathological variations in digestion. At the end of the chapter, we find short sketches of the comparative anatomy of the digestive organs, and of digestion in plants. Absorption and animal heat occupy the next sections; the storage of heat, the phenomena of fever, the action of cold on the body, and the artificial lowering of the bodily temperature being some of the subjects treated of in subsections.

The last chapter in this volume is devoted to the Physiology of the Metabolic Phenomena of the Body, under the following divisions. I. *Substances used as food.* Water; salts; milk (with an account of the structure of the mammary glands), the composition, tests—preparations of milk; eggs; flesh and its preparations—composition of the flesh of various animals compared; vegetable foods—cereals, pulses, potatoes, fruits, and green vegetables; condiments; tea, coffee, chocolate; alcohol, including wine, beer, and spirits. II. *Phenomena and laws of metabolism.* (*a*) Equilibrium. (*b*) Hunger and starvation. (*c*) Under different diets. (*d*) Origin of fat. (*e*) Corpulence, conditions favouring and methods of counteracting it. III. *Metabolism of the tissues*, with subsections on regeneration of organs and tissues, transplantation of tissues, &c. IV. *General view of the chemical constituents of the organism.* Thus the volume closes with one of the most complete and useful chapters in the whole book.

The translator is to be congratulated not only upon presenting to the medical profession in England a clear and very readable translation of a book which is certain to repay attentive study, but also upon his very successful choice of additional matter, which considerably enhances the value of the work. As regards the illustrations, they have been increased from 106 in the fourth German edition to 176 in the English version. They are everywhere very good, and many of them are new to English text-books.

VINCENT D. HARRIS, M.D.

Article 3750.

Hints for Invalids and Travellers on the Climate of Luxor and Egypt, &c. By T. E. MacLean, M.B. 8vo., pp. 23. London : H. K. Lewis. 1884.

Australasia as a Resort for Invalids and Tourists. By A. Leslie A. Eccles, L.R.C.S.E., &c. 8vo., pp. 26. Torquay. 1884.

Both these pamphlets contain some useful information for invalids and travellers.

These are scarcely times in which invalids will be very anxious to resort to the Nile; still we are obliged to Dr. MacLean for the account he gives of Luxor, and for the study he has made of its climate.

Luxor is just above Thebes, and, like Upper Egypt, is celebrated for the extreme dryness of its air. The voyage from Cairo occupies about twenty-three days, and Dr. MacLean is inclined to think that Cairo should be left near the middle or end of November, while Luxor should be left on the return voyage by the end of April. The hotel at Luxor is a large square building, standing in the centre of a garden, and is about 350 yards distant from the Nile. It is substantially built, with very thick walls. The great use of the thickness of the walls is that, if the windows be managed properly, there is scarcely any change between the day and night temperature of the bedrooms, although there is a very great difference between the minimum temperature of the external air and that of the bedrooms. Again, the temperature in the shade might in the afternoon be as high as 103°, while the temperature of the salon was only 73°. The daily range of the thermometer was very great; in January, 23°·7; in February, 31°·7; and in March, 38°·45. These great ranges are mainly brought about by the low temperatures which obtain at night, in consequence of the rapid radiation of heat under a cloudless sky. We are sorry to learn that a residence at the sulphur-baths of Helouan, fifteen miles above Cairo, cannot be recommended to invalids. At least, the hotel is not suited for a winter residence.

Mr. Eccles has a high opinion of the value of long voyages, and offers a good many useful hints regarding them. He gives a slight account of the various Australasian climates, and enlarges on the climate of New Zealand. He seems to think very highly of that island, and has seen with admiration its wonderful hot springs. They appear to be coming much into use, and ought to be valuable aids to recovery from the sequelæ of attacks of acute rheumatism, which are common in that quarter of the world.

John Macpherson, M.D.

Article 3751.

Obstetrics; the Theory and Practice. By P. Caseaux. Edited by Tarnier, translated from the French and re-edited by R. J. Hess, M.D. London : H. K. Lewis. 1885.

This is the seventh American edition of Caseaux's well-known work. It is only fair to say that much of the success of Caseaux's midwifery in this country has been due to the enthusiastic and devoted work bestowed upon it by Tarnier when he was in the full fruition of experience, but had not then become absorbed by practice. We doubt if Caseaux would have survived so long but for this. As is well known, Professor Tarnier is now engaged in an original treatise upon obstetrics, embodying his own experience and setting forth the results of a life of toil and scientific observation. Dr. Hess states that he has been careful to preserve the teaching of Caseaux and Tarnier intact. In this he has done well. There is, indeed, not much to alter. For the information of those unacquainted with the book, we may state that it forms almost an encyclopædia of French midwifery, and enunciates the views and practice of the best French writers on the subject. It is exhaustive. It contains more than a thousand pages. It is illustrated by 159 drawings, some of which are coloured. The arrangement of the matter is in strict physiological sequence; but, as is unfortunately so often the case in works which are reproductions types of various size, brackets, and foot-notes are relied upon to assert the individuality of the several collaborators. This is apt to confuse the reader.

Fancourt Barnes, M.D.

NEW PREPARATIONS.

Article 3752.

LIQUOR EUONYMINI ET PEPSINÆ COMPOSITUS.

This most useful preparation is an exceedingly well-devised and valuable medicine, combining, in a convenient and palatable form, a valuable hepatic and digestive agent. It meets a want very often felt by prescribers for the treatment of the forms of indigestion and flatulence due to deficient secretion of bile, as well as atony of the stomach and insufficient secretion of gastric juice. The preparation is likely to be found exceedingly effective, and, in practice, we have found it both handy and satisfactory. The manufacturers are Messrs. Oppenheimer, Sun Street, Finsbury, E.C.

DIETETIC NOVELTIES.

Article 3753.

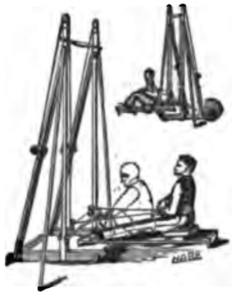
We have received from the Bordeaux Wine Agency (London) (Messrs. Rozenbaum & Co.) Craven Terrace, Bayswater, a sample of claret together with a liqueured wine, Crème de Bordeaux, prepared from it. We have carefully tested the claret and find that it is a good wholesome wine, free from any adulterant or artificial colouring matter. Claret is not as a rule appreciated by English people, and the Crème de Bordeaux has, therefore, been prepared for the purpose of superseding it, more especially for medicinal purposes, and it is recommended for diabetic and other patients. We think that in many cases this wine will supply a want much felt; the ingredients used in liqueuring are of the best quality, and certainly render the wine a more agreeable drink to those who are unaccustomed to claret or dislike its taste. It is a genuine liqueured wine.

NEW INVENTIONS.

Article 3754.

GYMNASTICS AT HOME.

Although there is, no doubt, a growing desire on the part of the youth of the present day to practise gymnastics, the difficulties that have interposed themselves in the home, owing to the non-introduction of a compact apparatus at a reasonable price, has been an insuperable barrier to a daily exercise of the limbs. Such an apparatus is now within the reach of persons of the most moderate means. This apparatus, called the 'Excelsior,' has been introduced here from America by the Chadborn and Coldwell Manufacturing Company, Upper Thames Street, and is already meeting with a large amount of patronage. It was originally invented by a medical man for his own use, and since elaborated and perfected by the makers. In a space occupying only 2 feet square at the base by 7 feet high, the largest size being only 4 feet by 22 inches by 7 feet high, and consequently large enough for the tallest man, a complete gymnasium is secured capable of introducing about one hundred different exercises; indeed, in the opinion of some experts some of the muscles have never been properly exercised until the introduction of the 'Excelsior' machine. A few illustrations are appended, which give a good idea of the apparatus. The primary exercises provided for include a rowing machine, chest bars, horizontal bar, pulling weights, high, direct, and low chest motions, floor motions, curved board (for back, chest, neck, and abdominal muscles), leg weights, bicycle motion, health lift, trapeze and spring board, while what may be termed the secondary uses range over too wide an area to be here detailed. The great advantage of this machine is, that it is adapted to persons of all ages, most of the exercises being accomplished by means of ropes and weights, adjustable to all ages and strengths, which slide up and down the inclined plane at the back in a groove or tramway. One of the most perfect illusions is that of rowing. Located on a sliding or fixed seat, the oarsman may almost fancy he is operating with a pair of sculls on the real element, and may keep himself in daily practice. Colonel Cleather, Q.M.G., Her Majesty's Inspector General of Gymnasia, says:—'I can confidently recommend it as one of the most perfect apparatus of the kind, and admirably calculated to promote muscular development without injury to the system.' The smallest machine can be purchased for five guineas, and about ten pounds will cover the cost of the largest, with a variety of extra attachments for special exercises and the curative treatment of spinal diseases.



Rowing Reverse Movement.—Expands the Chest and Strengthens the Legs and Arms.

Fig. 1. Rowing—Start and Finish. To develop the Arms, Legs, and Back.

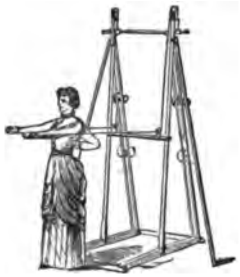


Fig. 2. Direct Chest Movement. To deepen the chest and draw the shoulders back.

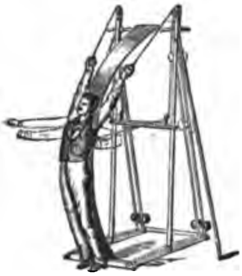


Fig. 3. Curved Board—To strengthen the Back, Neck, Abdominal Muscles, and Expand the Chest.

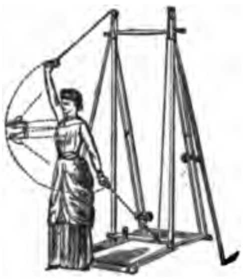


Fig. 4. For Curvature of the Spine.

Article 3755.

THE ATMONEMETOR, OR SPRAY-PRODUCER.

This little instrument has been designed by Dr. Alfred Wright, of Margaret Street. It consists of a bottle, or other convenient vessel, for holding the fluid to be distributed as spray, with a plug or stopper into which are fitted tubes as represented in the drawings. The spray is produced by means of a syringe, with a piston, which is worked by the aid of a spring. The instrument is of small size, and can be conveniently used with one hand, as shown in fig. 2. It was originally intended for use in diseases of the throat, and with this view there is a plate under the exit-tube, which can serve as a depressor of the tongue. The instrument is ingenious, and appears likely to be useful not only in throat cases but for other purposes, where the application of a fine spray is advisable. It is manufactured by Messrs. Krohne and Sesemann, of Duke Street, Manchester Square.

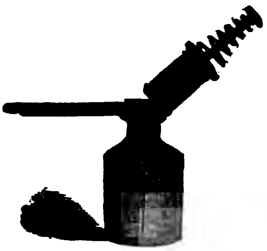


Fig. 1.

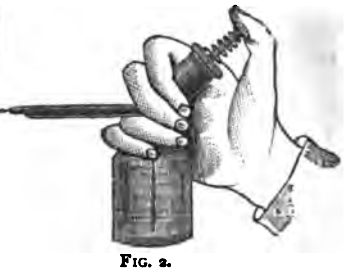


Fig. 2.

MISCELLANY.

Consanguineous Marriages.—At the annual meeting of the Newcastle Throat and Ear Hospital, held recently, Dr. Ellis, the medical officer, stated that a great number of the deaf and dumb children were the offspring of parents who were cousins. It was not sufficiently known that deaf and dumb children were increasing from parents who were nearly related.

Salicylic Acid as a Preservative.—In the *Lancet*, Dec. 1884, p. 1171, it is noted that a bottle of 'Marsala must' has been received from Messrs. Burgoyne & Co., 16 Coleman Street, which has been effectually preserved by the action of a very small proportion of salicylic acid. This is very remarkable, as grape-sugar is peculiarly liable to fermentation: the antiseptic and antiputrefactive powers of salicylic acid are shown in a very strong light, by the perfect success of this interesting experiment.

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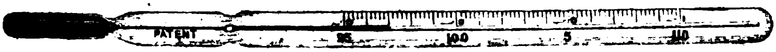

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From the **MEDICAL TIMES AND GAZETTE**, 11th February, 1882.—'*A new Clinical Thermometer.*—We have received from Messrs. Ferris & Co., of Bristol, a new Clinical Thermometer, which is especially commendable for two or three reasons. The register of it is formed by a long column of mercury instead of by a detached short portion, the mercurial column remaining above the constriction in the tube instead of retreating within the bulb. The capillary column of mercury is magnified into a broad band by a special shaping of the surface of the glass opposite the index readings. And each instrument is marked *on the stem with the corrections to be applied to the scale readings, determined by comparison with the standard instruments at Kew.* The Thermometer will be found very trustworthy and convenient.'

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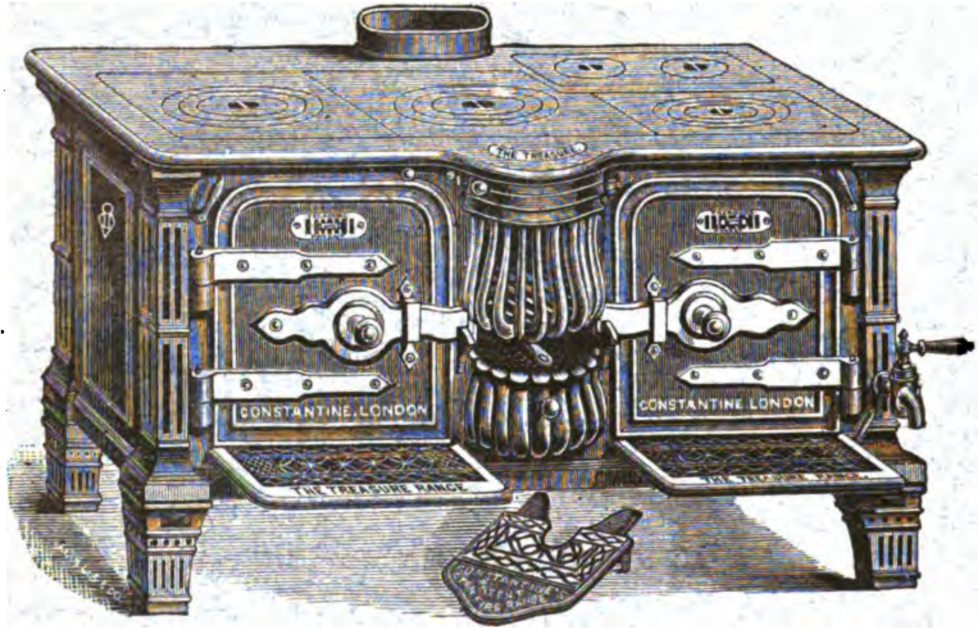

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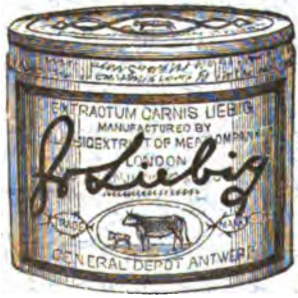

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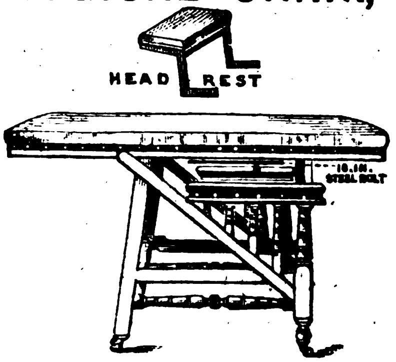

The London Medical Record.

ARTICLE 3756.

FERRAN ON THE DIAGNOSIS OF CHOLERA BY MEANS OF THE MICROBIOLOGICAL EXAMINATION OF THE EVACUATIONS

DR. JAIME FERRAN formed one of the commission sent from Barcelona to Toulon to study the recent epidemic of cholera. The following is an abstract of an article published by him in the *Revista de Ciencias Medicas*, and dated from Toulon, Sept. 17, 1884.

The recent investigations of Drs. Nicati and Rietsch have done much to solve the question of the cholera microbe. What was only admissible as hypothesis has now become an established fact. Artificial cultivations of the specific comma-bacillus determine, under certain experimental conditions, anatomo-pathological conditions in every respect similar to those of cholera, when injected directly into the intestine of certain animals, guinea-pigs, dogs, &c. Though these experiments require confirmation, there is nearly positive proof that the comma-bacillus is the true cause of cholera; and in doubtful cases, especially at the beginning of an epidemic, the microscopic examination of the evacuations will decide the diagnosis. Comma-micrococci are found elsewhere than in cholera dejections. They have been seen in the diarrhœa of Cochin China; they have also been found in leucorrhœal discharges. Dr. Nicati has seen similar microbes in the intestine of pigs, and has found them in thousands in his own stools, and the author has seen them in the water-supply of Marseilles, and has kept preparations of them. He says, 'in the matter of microbes the form is only of secondary importance; their chemico-biological function is the important point.' The symptoms of the algide stage correspond to the effect produced by the ptomaines elaborated by the cholerigenic fungus. The activity, nature, and diffusibility of the secretions explain the symptoms at a distance, the painful points in the spine observed by Dr. Thomas, of the Hôpital Saint-Mandrier, of Toulon, included. The microbe, therefore, without leaving the intestine, may complete its fatal action. Although, in the case first examined in Marseilles, bacteria evidently existed in the blood, it must be remembered this was not a typical case, since the patient was phthisical; and, moreover, it is known that when any intercurrent disease causes the death of an individual affected by tuberculosis, or even by chronic bronchitis, septic symptoms and alterations in the blood appear almost constantly in the moments of vital depression which precede death. In such cases it may be conceived that the specific bacteria of cholera may enter the capillaries of the tubercular ulcerations of the intestine, and appear at any other point of the capillary system. However, the examination of the blood, as to the existence of the microbe, and as to the true nature of the chemical alterations which the secretions of the microbe cause in it, still requires much and detailed study.

It is certain that the blood in cholera does not commonly contain bacilli; but a morphological alteration of the corpuscles, only perceptible in the disposition of the glomeruli which these form, is constantly found. This, however, has no diagnostic value, since it does not differ from other analogous alterations determined by other infectious agents. On the other hand, the cholerigenic bacillus of Koch is found constantly in more or less abundance in the rice-water stools of cholera, and especially in cases in which, from the scantiness of the dejections, it has not been almost completely eliminated, as happens when the premonitory diarrhœa has lasted many days.

For the demonstration of the bacilli, the author prefers the following process. In a wide-mouthed flask with a capacity of about 30 cubic centimètres, and perfectly sterilised by heat, are placed 15 cubic centimètres of the cholera dejection, taken if possible as soon as expelled. The flask (a test-tube answers admirably) is closed with cotton-wool, sterilised also by heat, and impregnated with a non-volatile antiseptic, such as boracic acid; it is then exposed to a temperature of 25° to 30° C. (77° to 86° Fahr.) during twelve to twenty-four hours. The flask must never be shaken, and the solid matters must remain at the bottom. However small the number of comma-bacilli in the dejections, even if the number be so small as not to be easily found, under these conditions, if there be a single germ, it rapidly multiplies; and, as its life is essentially aërobic, it forms on the surface of the liquid a species of mycoderm, almost imperceptible from its extreme tenuity. The same plan of cultivation is followed by Nicati and Rietsch, of Marseilles. By this method of cultivation pure preparations are rarely obtained. In time, the large number of cases in which observation formerly gave negative results only, because the *corpus delicti* has been eliminated, will by the use of this method disappear. A very small drop of the cultivation-liquid is to be taken with a needle and spread on a cover-glass, the needle being held parallel to the glass. The bacillus of Koch can be at once recognised; but its examination is much facilitated by staining it with a basic solution of aniline violet, prepared as follows: A. distilled water, 150 cubic centimètres: oil of aniline, 20 cubic centimètres; mix, shake vigorously, and filter in a previously wetted filter. The liquid, now alkaline, is transparent, the excess of undissolved oil of aniline remaining in the filter. The alkalinity of the liquid favours the solution of the colouring material, and the impregnation by it of the microbe. B. Take of the solution A, 100 cubic centimètres; alcohol, 10 cubic centimètres; violet of aniline, 2 to 4 grammes. After spreading the bacillus-containing liquid on the cover-glass, it is to be dried gently over a spirit lamp, and a drop of solution B dropped on it with a glass rod. After five seconds it is washed with a solution of corrosive sublimate, 1 to 1,000, and then with distilled water. It is then dried again, and mounted on a slide with a solution of Canada balsam.

Of other methods of cultivation and demonstrating the bacillus, the author defers the description until he gives the results of his observations *in extenso*. In many cases the simple examination of the rice-water stools is sufficient without previous cultivation; by this simple means the diagnosis of cholera is much facilitated. It ought especially to be appealed to at the commencement of an epidemic, when doubt exists as to its specific character, and while the foci of infection are still so limited that prophylactic measures can be taken with the best chance of success.

G. D'ARCY ADAMS, M.D.

ARTICLE 3757.

SEMMOLA ON THE TREATMENT OF CHOLERA.

IN *La Medicina Contemporanea* for December, Prof. Semmola contributes a very interesting paper under the title of 'Recent Therapeutic Researches on Cholera.' He is inclined to admit Koch's conclusions as to the parasitic nature of cholera, but holds that this theory can never be a point of departure for the rational and scientific treatment of the disease. Antiparasitic treatment, is not and never will be the abortive treatment, for the following reasons; the best known and most powerful parasiticides cannot be taken in quantity sufficient to destroy the microbes without harm to the human organism; and even if such an agent were found, the death of the microbe would constitute but a small part of the treatment, since the graver phenomena of cholera are incontestably due to a chemical principle (ptomaine?) which successively poisons the nerve-centres, and is already in process of formation in the intestine when the diarrhœa warns us that an attack of cholera has commenced. The diarrhœa from its first commencement must be considered as the first result of the poisoning of the nerve-centres of the abdominal sympathetic.

The specific remedy for cholera, therefore, not being discovered, treatment must be either symptomatic or physiological. From symptomatic treatment much good may result, if too much be not demanded of it, and the author gives a word of caution against too active medication. Under physiological treatment, that is, treatment directed to augment in every way the resistance of the economy to the invasion of the cholera poison, comes first, absolute repose of the affected organs, that is, of the gastro-intestinal canal, with complete abstinence from food from the first manifestation of the diarrhœa. From the first loose evacuation, if during the prevalence of cholera and without question of diagnosis, it is absolutely necessary to maintain a rigorous fast; even a simple cup of broth may contribute to the development of a grave attack, and no food must be taken until the diarrhœa has completely ceased for twenty-four hours. The author's personal experience, agreeing with that of all the medical staff of the Croce Bianca Hospital, of which he was the chief, and over 6,000 cases came under their care, proves beyond doubt that sometimes five or six teaspoonfuls of broth given prematurely have been sufficient to cause a severe relapse, with the gravest symptoms (asphyxia, algidism, &c.). The best food to recommence with is milk given in small quantities.

The second indication is to arouse opportunely the physiological powers by physiological therapeutic means. For this purpose he recommends the hot bath (38° to 40° C.) in the first stage of the disease. In the algide stage, in which the hot bath has been often used, its effect is at most mechanical, but in the first stage it stimulates the rich peripheral network of nerves, and by reflex action the centre of the circulation, and hence produces the harmonious re-establishment of the physiological functional relations between the cutaneous surface and the gastro-intestinal mucous membrane, and by causing perspiration it favours elimination with the sweat of the toxic principles. The bath may be repeated at intervals of one or two hours, and the patient, on coming out of the bath, must be wrapped in flannel and given warm drinks with aromatics and a little alcohol. The hot bath is to be had recourse to directly the patient with slight diarrhœa complains of pain in the epigastrium, with or without vomiting. In other cases of simple diarrhœa without epigastric pain, when the diarrhœa resists treatment (repose, fasting, opium, tannin, &c.), the bath is to be used. In hundreds of patients in whom the diarrhœa had been obstinate for several days, with six to twelve evacuations in the twenty-four hours, which would have infallibly become an attack of true cholera, one or two hot baths, followed by free sweating, have been sufficient to completely arrest the diarrhœa.

Thirdly, small doses of opium (laudanum, Battley's liquor, or chlorodyne) should be given to affect the nerve-centres and render them less sensible to the invading action of the toxic principle, as well as for its action on the morbid secretion of the intestinal mucous membrane.

In the period of reaction the treatment should be most simple. If reaction take place slowly and without much fever, hygienic, and, above all, dietetic treatment, is all that is necessary. Small quantities of milk should be given to commence with; it must be borne in mind that the least error in diet may prove fatal. If reaction take place abruptly, and with high fever, antipyretic treatment with cold compresses, and general cold baths are indicated. Cramps, pains, vomiting, &c., often recur during this period; but these symptoms are not now due to the cholera poison, but to gastritis, commonly caused by the abuse of alcohol and other irritants administered during the first stages. During the period of reaction, it is interesting to note, there is a persistence of some symptoms in relation to the functions most strongly affected during the development of the attack; for instance, weakness of the heart's action, epigastric pain, with anorexia or persistence of a general subcyanotic colour, with feeling of great debility. These phenomena are due to the exhaustion of those ganglionic and bulbar nerve-centres which have been chiefly affected by the cholera poison. The poison no longer exists, but its effects endure; and if, in the height of the attack, gastric, vaso-motor, cardiac, or asphyctic symptoms predominated, so now weakness of the centres of innervation in relation with the predominant form must be expected. Here therapeutic treatment may do much good; and the author recommends for cardiac hyposthenia hypodermic injections of caffein, for epigastric pains strychnia, and inhalations of oxygen, with small doses of valerianate of quinine hypodermically, in the persistent subcyanotic condition.

G. D'ARCY ADAMS, M.D.

ARTICLE 3758.

MÜLLER ON THE DIAGNOSTIC VALUE OF TUBERCLE-BACILLI.

SPINA, and more recently Matray and others, having asserted that bacilli identical in form with the tubercle-bacillus of Koch, and behaving in the same way with staining reagents, were to be found in the sputa of non-tubercular and even of healthy persons, Dr. Friedrich Müller, of Würzburg (*Verhandlungen der Physikalisch-Medicinischen Gesellschaft zu Würzburg*), examined the expectoration of fifty-two patients suffering from measles, whooping-cough, croupous and catarrhal pneumonia, pulmonary infarction, heart-disease with pulmonary and bronchial catarrh, &c.; but, though all the preparations were carefully treated by Ehrlich's method, in not one were red-stained bacilli discovered, and their absence was also ascertained after the most searching examination of the sputa in cases of bronchiectasis and fetid bronchitis, in which other micro-organisms of all kinds abound.

On the other hand, the examination of the sputa of seventy-two phthisical patients led to their detection in sixty-seven; in a few incipient cases, however, not until after several trials. The five in which they were not observed were of this class, and four of them left the hospital too soon to give any satisfactory result. But in five others the diagnosis, made solely on the strength of the fact that bacilli were present, was subsequently confirmed by the development of physical signs. In striking contrast with these was a case of chronic pneumonia, with wasting fever and consolidation of the apices, in which bacilli were sought for in vain until a few days before death, when they suddenly appeared in considerable numbers. The pneumonically infiltrated apices were found after death thickly studded with grey tubercles, a few of which had recently broken down and become confluent.

[It is evident that, so long as the bacilli are limited to glands or structures in no direct communication with the alveoli or bronchioles, they cannot be expectorated, and that, therefore, such negative evidence does not absolutely exclude the existence of tuberculisation. Sooner or later, however, the probability is that the formation of a cavity or the extension of the process will enable them to gain entrance to the air-passages, and this may in some circumstances occur even before any physical signs are possible, and while curative measures are most likely to be successful.—*Rep.*]

In several cases, the symptoms of which closely resembled those of phthisis, the continued absence of bacilli led to the diagnosis of bronchiectasis, &c., confirmed by the further course of the disease; while in others the tubercular nature of the affection was early indicated by the appearance of bacilli and verified *post mortem*.

Müller considers that from a diagnostic point of view the presence of bacilli in the expectoration is of far greater value than that of elastic fibres, since these will be found in any destructive process, tubercular or non-tubercular.

In six cases of more or less chronic pleurisy, a tubercular origin was negatived by the absence of bacilli from the expectoration, and absorption was ultimately effected; whereas, of six others in which they were present, in three of these, before any physical signs of tuberculisation could be made out, the unfavourable prognosis was justified by the result.

On the other hand, so long as there was no direct communication between the seat of the tubercular process and the serous cavities, the search for bacilli in exudations was invariably fruitless. It was so in nine cases of pleuritic effusion, serous or purulent, though in four of these they were abundant in the expectoration, and in two of peritoneal effusion, in which there was a strong suspicion of tubercle. But they were found in the purulent and in the serous fluid from two cases of pneumothorax, in one of which a minute communication between a pulmonary cavity and the pleural space was detected after death.

The second case presented two remarkable features, viz., that in a second sample of the fluid, drawn off three weeks later, only three bacilli were found in sixteen preparations; and that after the establishment of the pneumothorax the scanty expectoration contained notably fewer than before, the patient's general condition being at the same time greatly improved.

From these facts, Dr. Müller infers that the pleuritic exudation does not present a favourable medium for the cultivation of the bacilli, and that the compression of the lung-tissue by the pneumothorax checks the activity of the tubercular process.

The examination of the fæces in the case of phthisical patients suffering from diarrhœa was not conclusive as regards the diagnosis of intestinal tubercle, since the bacilli might have been swallowed with the sputa; and the same applies, *mutatis mutandis*, to the diagnosis of tubercular laryngitis.

Müller failed entirely to detect bacilli in the breath of palpably tubercular patients, whatever method he employed for their arrest. This negative experience agrees with the position maintained by Nägeli, that micro-organisms are not liberated from fluid media, and with the failure of Günther and Harms to infect rabbits by means of the breath of tubercular men or animals.

[It does not, however, appear to be irreconcilable with the growing belief in the communicability of tubercle by association with phthisical persons in confined rooms, nor with the suggestion of Birch-Hirschfeld that the frequency of tuberculosis among operatives, as printers, tailors, and sempstresses employed in crowded and ill-ventilated workshops, though not in dusty trades, may be due to the infection by one or more phthisical individuals of the more susceptible of their fellows; for, since Dr. De Chaumont has demonstrated the presence in the air of hospital wards of epithelial scales and other pulmonary *débris*, which must have been set free from *dried* sputa, it is highly probable that the bacilli may escape into the air in like manner. Further investigations in this direction would probably lead to valuable results.—*Rep.*]

As a general rule, the rapidity of the course of the disease and the intensity of the febrile disturbance are directly proportioned to the number of the bacilli in the expectoration, and this affords an important indication in prognosis.

The exceptions to this rule, frequent though they be, are easily explained on anatomical considerations. When in acute febrile cases bacilli are not numerous, it will usually be found that there is extensive gelatinous infiltration, that there has been but a scanty formation of cheesy nodules, and that the cavities are few and small. On the other hand, when the bacilli are out of all proportion to the fever, &c., the probability is that one or more cavities of considerable size communicate freely with the bronchi, and that the secretion is abundant. The inner walls of cavities are the chief seats of the development of the bacilli, whereas in the surrounding inflammatory and infiltrated zone they are few, or even altogether absent. They abound also in the caseous masses and necrosed portions of the lung; but, if these are circumscribed by inflammatory infiltration, their extension is limited and their escape is checked.

As regards the size of the bacilli, they are least in the minute tubercles of basilar meningitis and of miliary tuberculosis, as well as in the early stages of peribronchial deposit, while in lung-cavities they are found of every size, from the least to the greatest.

EDWARD F. WILLOUGHBY, M.B.

ARTICLE 3759.

SORMANI ON THE TUBERCLE-BACILLUS.*

A SERIES of experiments by Professor G. Sormani, professor of hygiene in the University of Turin, was directed to determine—1. What happens to the bacillus of tubercle when it is exposed to artificial digestion; 2. To what temperature the bacillus maintains its vitality, and what temperature kills it; 3. What happens to the bacillus when kept for a long time in water; 4. How long the bacillus maintains its virulence when deposited on linen.

1. *Artificial Digestion of the Bacillus of Tubercle.*—The stomach of a pig recently killed, and kept without food for forty hours before death, was the source of the gastric juice employed. Complete physiological digestion not only destroys the vitality of the bacillus of tubercle, but its form also. The destruction of the bacillus is not among the first phenomena of digestion, rather among the last to happen—that is to say, these organisms are, among organised substances, the least easily attacked by the digestive juices. A digestion of too short duration, or of little activity from scarcity of gastric juice, or from insufficient acidity, does not attack the bacillus of tuberculosis, and in such case it maintains its virulence nearly unaltered. The knowledge of this helps to explain the frequency of intestinal and mesenteric tuberculosis in children and its rarity in adults, the digestive power of the stomach in children being comparatively feeble. It also explains how the stomach of the tubercular patient, little active, as a rule, from catarrh due to the fever, and possibly to the remedies, is of so weak digestive power that it readily allows these bacilli to pass unaltered, which the patient probably swallows with either the saliva or the food. These bacilli, taking up their quarters in the intestine, and especially in the rectum, there produce tubercular ulceration, mesenteric adenitis or abscesses, and fistulæ about the rectum.

2. *Heating and Cooking of the Tubercle-Bacillus.*—Milk was used as the menstruum for the bacilli, as perhaps the most common vehicle for the introduction of the bacilli into our digestive tract. The milk was rendered infective by mixing with it a quantity of bacilliferous sputum, after being previously sterilised. It was then heated in a water-bath slowly to 70° C., and kept for ten minutes at this temperature. A portion was then withdrawn for the first inoculation. The remainder was then heated to 80°, then to 90°, and finally boiled. Inoculations were made with the milk at each temperature. The animals, killed after the expiration of forty-one days, all gave evidence of tuberculosis. But when the milk was boiled for five minutes, the animals did not suffer from the inoculation. The boiling had killed the bacillus, which could still be recognised in the milk, when coloured by Ehrlich's and Weigert's method. Further experiments showed that the virulence of the bacillus not only is destroyed by boiling for five minutes, but that it loses its vitality when kept for one hour at a temperature of 60° to 65° C.

3. *Tubercular Sputa kept in Water for a Year.*—After 110 days the bacilli were found at the bottom of the vessel; under the microscope they were seen to be rather isolated and scattered than in groups. Water, even when rich in organic substance, is not a medium in which the bacillus can multiply. Koch has not been able to obtain an artificial cultivation in a liquid medium. The author has examined the deposit of many drinking and ditch waters, and has never met with bacilli having the same physical characters and giving the same chemical reactions as the tubercle-bacillus. Water, however, in which the linen of phthisical patients has been washed, might, if thrown on the soil near a well of drinking-water, infect it, and so regain admittance to the human organism. After being kept for a year, the bacilli were found in the lowest stratum of the water; but injections in animals gave rise to no symptoms of tuberculosis; probably the hydrosulphuric acid which accumulated in the water, the vessel being closed, had killed the bacillus by its prolonged contact. Short contact of water containing hydrosulphuric acid is not sufficient to kill the bacillus. In one experiment, an inoculation after 100 days of such contact gave rise to tuberculosis.

4. *Tubercular Sputa on Linen.*—Tubercular sputum, known to be highly bacilliferous, was spread on linen and allowed to dry at the ordinary temperature. After twenty-five days, an inoculation was made with this. In two months, there was a purulent wound at the site of inoculation. The animal was killed on the sixty-first day. The inguinal glands on the inoculated side were enlarged, the liver fatty, the spleen enlarged, and both the lungs were invaded by small yellow-grey tubercles in most extraordinary number. Other animals were inoculated at three months and six months, and in these no symptoms of tuberculosis followed. These experiments tend to show that the sputa, with which the linen of phthisical patients is easily soiled, maintain their virulence for several months; but that after four to six months in all probability their infectiveness is fortunately lost. The disinfection of the linen of tubercular patients should, therefore, be always recommended, especially that of the pocket-handkerchief; this may be obtained by immersion in a 5 per cent. solution of carbolic acid for twenty-four hours.

G. D'ARCY ADAMS, M.D.

ARTICLE 3760.

HORSLEY ON THE RELATION OF THE THYROID GLAND TO THE PATHOLOGY OF MYXŒDEMA AND CRETINISM.

IN the *Brit. Med. Jour.*, January 1885, p. 111, and February, p. 211, are published the Brown Lectures, delivered in December 1884, by Professor Victor Horsley, on the subject of the thyroid gland.

The author commences with the statement that until eighteen months ago it was not suspected that the thyroid gland was of great importance to the animal economy. Next, the structure and the anatomical position of the gland are briefly alluded to, and the various theories concerning its function, which have been put forward up to 1883 are reviewed;

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* SORMANI, PROFESSOR G.—Artificial Digestion, Heating, and Boiling of the Tubercle-Bacillus. Conservation of the Same in Water and on Linen. Researches in Experimental Hygiene. (*Annali Univ. di Medicina*, Aug. 1884.)

and then the question as to what happens if the thyroid gland be removed, is fully considered. The phenomena which follow thyroidectomy in monkeys are summarised as follows. At a variable period after the operation, averaging about five days, the animal is found to have lost its appetite for a day or two, and, on closer examination, to exhibit slight constant fibrillar tremor, in the muscles of the face and hands and feet more especially. These tremors disappear at once on voluntary effort. At the same time the animal is noticed to be growing pale and thin, in spite of the appetite returning quickly with great increase; the tremors rapidly increase, and affect all the muscles of the body without exception; the animal becomes languid, paretic in its movements, and imbecile. Then puffiness of the eyelids and swelling of the abdomen follow, with increasing hebetude. During these last stages the temperature, gradually falling, becomes subnormal, and then the tremors gradually disappear, as they came. Meanwhile the pallor of the skin often becomes intense, and, leucocytosis having been well marked, oligæmia follows, and the animal dies perfectly comatose in a variable period, but usually about five or seven weeks after the operation. The symptoms are next described in detail, and then the *post mortem* appearances are enumerated.

The pathological changes which are described are very similar to those observed by Dr. Ord in cases of myxœdema, especially the swollen, jelly-like, sticky condition of the subcutaneous connective tissue. There was also found an increase of mucin in the connective tissue to the extent of nearly four times the normal amount, but in the parotid the increase was found to be at least one hundred and seventy times the normal amount, the parotid and submaxillary glands being increased to about four times their normal size. The whole *post mortem* changes are summed up thus by the lecturer. Ablation of the thyroid causes atrophic changes in the central nervous system, and in the fat generally. It causes an increase in the general connective tissue, and a mucoid conversion of the ground-substance. This increase of mucin in the connective tissue is accompanied by an extraordinary secretion of the same stuff by means of the salivary glands, and also those of the alimentary canal.

Having proved that the thyroid gland is one of the most important glands of the body, the lecturer terminates with a discussion upon the surgical treatment of goître. Three groups of conditions call for treatment. 1. Hypertrophy, or, more correctly, adenoma, with or without cystic degeneration and fibroid overgrowth; under this heading exophthalmic goître and ordinary goître are included. The only treatment of the former which holds out a possibility of cure, is partial excision of the gland; the operative treatment of ordinary goître consists either in injecting the gland, or in partial excision of the gland, as under no circumstances is it justifiable to excise the whole gland for adenomatous or cystic goître. Mr. Sydney Jones advocates the excision of the isthmus of the gland, which operation is followed by shrinking of the goître, and no myxœdematous symptoms. 2. Cystic disease; the treatment in these cases consists in removing the cyst, but not the whole gland. 3. Malignant new growth; the treatment in these conditions must, of course, be total excision, whether the result be only palliative or not. The lecturer shows also that the loss of the functions of the thyroid gland produces the symptoms common to cretinism, true myxœdema, cachexia strumipriva, and the cachexia after thyroidectomy in animals, and trusts that further researches will soon solve the many questions now put forward on the subject of the uses of the thyroid gland. RICHARD NEALE, M.D.

ARTICLE 3761.

HARZ ON THE HISTOLOGY OF THE MAMMALIAN OVARY.*

THE author has endeavoured to find whether the partially solid, partially hollow, epithelial cords that are found in the ovary of the hare exist in other mammalia, and whether they be identical with 'Pflüger's tubes.' The ovary in the new-born human fœtus, 1·5 centimètres long, 3·8 millimètres broad, and 1·5 millimètres thick, presents on both its surfaces a number of diagonal sulci. The germinal epithelium is very regular; its cells are somewhat cylindrical. No primitive ova could be found by Dr. Harz, and from this he concluded that the process of migration of the ova into the stroma had completely ceased at the end of fœtal life. A thin tunica albuginea covered the entire surface of the ovary. The egg stratum contained no collections of ripe ova, but only primordial follicles, which lay isolated from each other by broad intervals of connective tissue; the deeper follicles bore a membrana granulosa, composed of two or three rows of cells.

Harz found the tubes of the Wolffian body as round circumscribed structures in the mesovarium, but isolated, and apparently at some distance from the hilum of the ovary. They were the structures termed epoöphoron by Waldeyer, and consisted of tortuous and partially convoluted canals, bearing cubical epithelium that filled up the lumen in some places [the reporter has found ciliated cells in these canals]; and in others large cells like primitive ova could be detected.

The author divides the epithelial structures derived from the germinal epithelium in the ovary of mammals, into groups that form long cords, groups that form canals, and groups that form scattered collections of cells. Epithelial cells in the ovary can only be derived either from the germinal epithelium or from the Wolffian tubes. There can be no doubt that tubes and strings of epithelium actually grow into the ovarian stroma out of the broad ligament. In many mammals (such as the pig) and in man this process of ingrowth is entirely absent (*unterbleibt dieses Hineinwachsen ganz*. This is entirely at variance with the reporter's observations, he having repeatedly found collections of cells and entire Wolffian tubes in the hilum of the human fœtal ovary). In some other mammals, the ingrowths from the Wolffian ducts were found in the ovary, in no mere rudimentary or atrophied type, permeating the entire stroma; these animals were the guinea-pig, hare, *cebus*, and horse. In a third series (the cat, ox, and marmozet) there was an intermediate condition, the Wolffian epithelium being less abundant in the stroma. This epithelium has no share in the formation of the membrana granulosa, nor in the formation of corpora lutea; though some cells in the corpora lutea bear a strong resemblance to those in the Wolffian canals.

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* Contributions to the Histology of the Ovary in the Mammalia (*Archiv für Mikro k. Anat.*, Band xxii., pp. 374-407, 1883; and Schmidt's *Jahrbücher der Gesammten Medicin*, No. 7, 1884).

Dr. Harz agrees, to a great extent, with Waldeyer in respect to the part which the germinal epithelium plays in the development of the ovary. The ingrowth of epithelium into the stroma appears to be due to a proliferation of germinal epithelial cells, previous to the sinking of the primitive ova below the level of the germinal layer, as Hubert Ludwig has observed in *Raja batis.* This proliferation of cells presses each ova down into the stroma. It is not certain that the connective tissue of the stroma actively shares in the process. The formation of the tunica albuginea commences in the region of the free border of the ovary, furthest from the hilum, and proceeds steadily towards it. Hence the primitive ova are first lost sight of towards the periphery of the ovary, while they are yet to be found in the direction of the hilum; this is well seen in the kitten. The follicles develop in the same direction, the oldest being found towards the periphery, where the primitive ova have disappeared; the more primordial existing at the same time in abundance near the hilum. Hence, after the rupture of ripe follicles on the surface, through the albuginea, the germinal epithelium may locally resume its functions. Primitive ova were found close to ripe prominent follicles and corpora lutea, in the ovaries of mice, cats, and guinea-pigs.

The cells of the membrana granulosa were never found to originate from Wolffian elements (as Cadiat believed), nor did they arise from the germinal epithelium in the sense of being detached epithelial cells surrounding the primitive ovum as it sank into the stroma. In numerous cases, the primitive ova were seen to break away for a time from all association with the germinal epithelium. There was no evidence that the membrana granulosa either arose from the Wolffian or from the germinal epithelium.

[This appears to be in accordance with Foulis's view, that the membrana granulosa springs from the stroma around the primitive ova. The reporter believes that the 'Pflüger's tubes' and 'epithelial cords' are mere appearances produced by microscopic section. It is noteworthy not only that Dr. Harz found great differences in the histology of the ovary in different animals, but that it differed in allied animals such as cebus and hapale; whilst in mammals of very different orders such as cebus and felis, or hapale and bos, it presented similar features. —*Rep.*] ALBAN DORAN.

ARTICLE 3762.

FISCHEL ON THE DUCT OF GARTNER.

DURING the past twelve months, there has been a great controversy amongst anatomists and gynæcologists on the ultimate fate of the excretory duct of the Wolffian body in the human female. In 1822, a Danish writer, Gartner, in his work, *Anatomisk Beskrivelse over et ved nogle Dyr-Arters Uterus undersögt Glandulöst Organ*, first clearly demonstrated the course of that duct which bears his name. Only two instances are recorded of persistence of these ducts in adult women. One case is based on an apparently accurate record of a dissection made in 1559. The second and more reliable is described by Fürst, in a German work published in 1868. The uterus had two cornua, and the abnormal canal existed on the right side only. A review of the subject of fœtal relics in the human organs of generation, as elucidated by comparative anatomy, will be found in the LONDON MEDICAL RECORD, November and December 1879.

Dr. W. Fischel, of Prague,[*] has recently endeavoured to clear up the question of the ultimate destiny of the lower part of Gartner's duct. The upper portion is often detected as a white cord, passing from the horizontal tube of the parovarium to the side of the uterus. It is the further course of the duct that is so much disputed. Dr. Fischel first quotes Beigel, who in 1878 alleged that he had traced distinct relics of the duct in the walls of the uteri of five fœtus, all at the ninth month of development. He assigned this embryological explanation to the alleged pathological vaginal cysts described in 1867 by Boys de Loury and Veit. Fischel agrees to Beigel's explanation of the nature of the relics in the uterine walls, but denies that they are constant. Dohrn, a few years since, examined a large series of female human fœtus. At the fourth or fifth month the duct of Gartner was found to run from the parovarium inwards, entering the uterine substance in the neighbourhood of what would, in a later stage, be the os internum. It then descended through the dense muscular tissue, running in the outer part of the uterine wall, till it entered the connective tissue of the vaginal wall and then ran downwards in the submucous tissue, becoming more and more atrophied. In no specimen could Dohrn trace the duct as far as the urethra. The left duct disappeared earlier than the right. Carl Rieder has also traced the duct through a similar course in eight out of forty human subjects, fœtal, youthful, and adult. He has detected small pouches and long diverticula in the duct as it passed through the walls of the cervix. This is a point of great pathological interest. Like Dohrn, he found that the left duct was the most frequently obliterated. Beigel states that the duct enters the uterine wall very high up, close under the origin of the Fallopian tube; Dohrn believes that it enters about the level of the os internum; Riedel found that it enters rather higher than that level.

Fischel traced the duct, in a still-born infant, as far as the vaginal portion of the cervix, and found that there it descended in the uterine substance, till, at a point about midway between the outer and inner os, it suddenly turned upwards, ending in a blind extremity before reaching the junction of the uterine and vaginal tissues. The descending part of the tube lay near the cervical canal, the ascending close to the periphery of the cervix. The ascending portion was sickle-shaped on section. Its lining membrane was smooth, but a few short papillæ existed, and at certain points true glandular diverticula, lined with cylindrical epithelium, were detected. The ascending and descending tubes were found to communicate at one point by a transverse diverticulum. In Fischel's case, as he rightly points out, the duct ran into the vaginal portion of the cervix, instead of passing from the uterine portion into the cellular tissue of the vagina. A slight anomaly in the development of the fused portion of Müller's ducts would readily account for this peculiarity in the course of the ducts of Gartner. The writers above quoted differ as to the epithelial lining of Gartner's ducts. The diverticula of these ducts in their course in the substance of the cervix would readily account for many of the cysts with solid contents that are found partly in the uterus, partly in the broad ligament, as Coblenz has shown. Whether they would account also for cancer and sarcoma of the uterus, is at present doubtful.

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[*] *Beiträge zur pathologischen Histologie der weiblichen Genitalien. Archiv für Gynækologie*, Band xxiv., Heft 1, 1884.

All the above authorities have failed to trace Gartner's ducts lower than the very uppermost part of the vaginal walls, near their reflection on to the cervix, and none of them, therefore, have traced them to the urethra. Kocks, Kleinwächter, Skene, Böhn, Max Schüller, and others have, on the other hand, all detected a pair of ducts in the walls of the female urethra. Max Schüller[*] has, however, traced these 'Skene's tubes' upwards into a pair of true tubular glands, and he has failed to find any communication between them and the ducts of Gartner. In short, the course of the duct of the Wolffian body from the parovarium through the broad ligament, and thence through the uterine tissue as far as the vagina, has been proved by dissection, but evidence that it ends in the urethral tubes is still based alone on comparative anatomy. It must be remembered that the involution of integument, upon which the structures that lie about the vestibule are developed, differs greatly in different mammals. Thus, for example, in the elephant and other animals, the cervix uteri includes the whole of the lowest part of the fused Müllerian ducts, the same part which in woman becomes the vagina from the uterus almost down to the vestibule. Hence the position of the orifice of Gartner's ducts, did they remain patent in all animals, would differ greatly in their relations to the external organs.

ALBAN DORAN.

ARTICLE 3763.

BRAMANN ON THE DESCENT OF THE TESTICLE.[†]

DR. BRAMANN found in special dissections of human embryos, that towards the end of the third and the beginning of the fourth month of fœtal life the testicle lay close to the internal abdominal ring. No connection between the gubernaculum and the testis could be detected at this period. The mesentery of the testis appeared, at this stage, longer than at an earlier date, so that the body of the gland had become more movable, but the epididymis more fixed. At the lower end of the gubernaculum, the peritoneum bore a small depression. The gubernaculum could as yet be traced only to the external ring; beyond that point, not a single fibre was to be detected. The scrotum was filled with loose connective tissue. At a somewhat later date, the testis was found to go distinctly backwards from the internal ring, passing once more into the abdominal cavity, whilst, at the same time, the gubernaculum increased considerably in size and became attached to the lower end of the testis; the vas deferens ran along the anterior aspect of the gubernaculum in its substance throughout. On examining, at this period, the external oblique muscle, its aponeurosis appeared thin and transparent in the region of the future external ring. A white cord, the process of the gubernaculum, could be seen through the transparent aponeurosis, lying in the inguinal canal. On pulling the testis upwards, the tissues over the site of the future external ring became drawn in, forming a funnel-shaped depression, but the scrotum remained perfectly unaffected by the traction, a proof that the gubernaculum was only connected with the abdominal walls and not with the scrotum. This condition remained unchanged till the beginning of the fifth month, except that the structures concerned grew larger. Throughout the sixth month, it was found that the gubernaculum rapidly increased in size, reaching its greatest proportions at the end of that period. A bundle of fibres could be detected, passing out of the outer ring, to be inserted partly into the aponeurosis of the external oblique, partly into the spine of the os pubis. At the same time, a series of muscular fibres from the internal oblique and transversalis, supplied by the genital branch of the genito-crural nerve, united with the bundle of fibres to form part of the enlarged gubernaculum. At the end of the sixth, or beginning of the seventh month, the descent of the testis was found to begin, the left passing downwards in advance of its fellow. The gubernaculum shortened at the same time; but this shortening process was at first only apparent, as its fibres grew longer and advanced more and more towards the scrotum, in proportion as it became shorter towards its abdominal extremity. A true contraction could only be verified at the stage when the testis had reached the internal ring. This process proceeded simultaneously with a prolongation of the processus vaginalis, which had hitherto remained in the same condition from the third month; but now for the first time this peritoneal involution became deeper. The coverings that invested the testicle and the vas deferens after complete descent were formed partly from the tunica vaginalis, partly from the gubernaculum. The tunica vaginalis pushed forwards the fascia transversalis, and the cremaster formed a muscular coat for the gubernaculum. This muscle was invested with a delicate membrane derived from a portion of the aponeurosis of the external oblique which was pushed downwards, not perforated, by the above-named structures. Over this investment, which was that known as the spermatic fascia in an inguinal hernia, lay the dartos, derived from the superficial abdominal fascia. Hence these well-known layers were found to be in their permanent adult position before the passage of the testis out of the external ring.

Bramann believes that the earlier and partial descent of the testicle is due to differences in the activity of development in neighbouring structures, those above and behind the gland growing rapidly and pushing it downwards. He does not think that this theory can explain the second and permanent descent of the testicle, and denies that the gubernaculum can pull the testis down into the scrotum through simple contraction of its tissues. The gubernaculum can draw nothing into the scrotum, since it has no insertion into that sac. It is more probably the contraction of cellular tissue lying on the inner aspect of the gubernaculum and connected with the tissues within the scrotum, that is the essential cause of the descent of the testicle. The development of the intestines behind the gland probably aids the process to a slight extent. Finally, Bramann admits that the 'great problem,' as Langenbeck terms this question, is by no means satisfactorily solved, and hopes that comparative anatomy may throw some light on the precise mechanism of the descent of the testicle.

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[*] *Ein Beiträge zur Anatomie der weiblichen Harnröhre.* Festschrift für Prof. Schultze. Jena, Berlin, 1883.

[†] Contributions to a Knowledge of the Descent of the Testicle. and of the Nature of the Gubernaculum in Man. (*Archiv für Anat. und Phys., Anatom.* Abth, pp. 310-340, 1884; and Schmidt's *Jahrbücher der Gesam. Med.*, No. 7, 1884.)

ALBAN DORAN.

ARTICLE 3764.

ISTOMANOFF ON IRRITATION OF SENSORY NERVES.

AT a meeting of the St. Petersburg Society of Russian Physicians (*Vratch*, No. 8, 1884), Dr. Istomanoff communicated the results of his experiments on the influence of strong and weak irritation of sensory nerves on the temperature of the body, on the volume of the limbs, on the blood-pressure, and on the pulse. The temperature was measured by a thermo-electric apparatus, the arterial tension by means of Basch's sphygmograph, and the pulse was examined by a polygraph of Knoll.

Irritation of the skin by titillation produced a decrease of the cutaneous temperature, amounting to 12° C., a diminution of volume of the limbs, a rise in the blood-pressure, and acceleration of the pulse. Pathic cutaneous irritation caused increased temperature, amounting to 0°·4 C., diminished volume of the limbs, and retardation of the pulse-rate. As to thermic cutaneous irritation; *a*. the action of cold (ice-bag, ether) was identical with that of titillation; *b*, the action of heat (from 50° to 90° C.) was identical with that of pathic irritation. In stimulation of the nasal mucous membrane; *a*. substances of a pleasant odour (attar of roses, heliotrope, &c.) acted similarly to titillation; *b*, offensive substances (sulphide of ammonium, &c.) acted like pain. In stimulation of the lingual mucous membrane; *a*. bitter and sweet substances brought about the same phenomena as those produced by titillation; *b*, sweet substances produced the same as those caused by pathic irritation; *c*, saline substances gave indistinct phenomena. Stimulation of the optic nerve (by transition from darkness to light) and of the auditory (by music and by discharging a small pistol) gave the same results as titillation. The author's experiments upon animals showed, also, that the volume of the brain decreased when the volume of the limbs increased, and *vice versâ*.

During the discussion which followed Dr. Istomanoff's communication, Professor S. P. Botkin related two cases in which he observed that the size of the spleen underwent an alteration according to the state of the patient's mind. One of the cases was that of a leukæmic patient, in whom the hypertrophied spleen became larger by 2 centimètres each time when he was depressed, and markedly diminished in its size when he was cheerful. Another patient, a woman, suffered from a reducible displacement of the spleen downwards; after the patient had been thrown into a state of grief by some sad events in her life, the splenic tumour became larger, painful, and irreducible. In course of time, with an improvement in the patient's mental state, the displaced organ could be again returned to its normal situation.

[A paper, by Dr. Sarah Post, on cutaneous irritation and pulse, is to be found in the LONDON MEDICAL RECORD, March 1883, p. 96. In the *Ejened. Klin. Gazeta*, Nos. 13, 14, and 15, 1882, Mrs. Maria M. Manasseïna, in an article under the title, 'A Note on a Forgotten Case of Wardrop' (a case of hemiplegia of 1½ year's standing cured by palmar titillation; see the *Edinb. Med. and Surg. Jour.*, 1812, vol. viii., p. 197), also states that the titillation produces a marked rise in the arterial tension, a striking decrease in the volume of the upper extremity, an acceleration of the pulse, amounting to six, eight, and fourteen beats per minute, a slight acceleration of respiration, and rise of the temperature (from 0°·1 to 0°·5 C.); moreover, she found an increase of muscular irritability and cutaneous sensibility.—*Rep.*]

V. IDELSON, M.D.

ARTICLE 3765.

LUNIER ON THE INCREASE IN THE NUMBER OF THE INSANE.

In the *Annales Médico-Psychologiques*, Sept. 1884, Dr. Lunier gives a continuation of his paper on the progressive increase in the number of the insane and its causes, which was published in the same periodical in Jan. 1870. He finds that the same increase which has been observed in all other civilised countries also holds good with France. In fact, the number of lunatics, 16,538 in 1835, had risen to 87,968 in 1872; that is, it had increased five times, allowing for the corresponding increase of the population. This apparent augmentation could in great part be accounted for by the increased number in the asylums, and the greater exactness of the census returns. He finds that, as a rule, for every 100 men in an asylum there are 110 women, from which one might readily conclude that insanity is commoner with women than with men. Dr. Lunier shows that it is a simple fallacy:

In	1842,	for	100	women	admitted	there	were	116	men.
,,	1852,	,,	100	,,	,,	,,	,,	115	,,
,,	1862,	,,	100	,,	,,	,,	,,	111	,,
,,	1872,	,,	100	,,	,,	,,	,,	117	,,
,,	1880,	,,	100	,,	,,	,,	,,	112	,,
Yearly average		,,	100	,,	,,	,,	,,	114	,,

Nervous insanity, which is the commonest form with women, is rarely cured, and does not notably shorten the life of those who are affected with it; on the contrary, general paralysis, which is most frequently observed in men, is almost always fatal in a few years; and alcoholic insanity, from which they generally recover, causes a great number of admissions and discharges in the asylums. At the end of the year there remain a comparatively small number of general paralytics and alcoholics, while a large number of chronic and incurable cases suffering from nervous insanity accumulate in the asylums. The true measure of the frequency of insanity is given by the admissions; and, on the average, there are admitted every year into the asylums 114 men for 100 women. Therefore, argues Dr. Lunier, men are more liable to become insane than women in the proportion of 114 to 100; but here again it might be objected that more men are sent to asylums than women, because a male patient is more difficult to manage out of an asylum. Dr. Lunier observes that, where facilities are given by the Government for the gratuitous admission of lunatics, they send into asylums, as insane, harmless imbeciles, hemiplegic dements, and weak-minded people, who formerly went and still should go to the hospitals for the incurable. Dr. Lunier believes that the increase in the number of the insane is much less considerable than is generally thought. Forty years ago the admissions increased at the rate of 12·5 per cent. yearly; now they only increase at the rate of 1·70 per cent. He considers it certain that the number of those affected with general paralysis, alcoholic insanity, and maniacal excitation, has become greater, especially in the towns. On the contrary, the number of idiots is diminishing; as for cretins, of whom there were from fifteen to twenty thousand, it will be difficult to meet any of them, even in the gorges of the Alps and Pyrenees.

W. W. Ireland, M.D.

Article 3766.

FOL ON THE FERMENTATION OF MILK.

Professor H. Fol, of Geneva, writes as follows in *Der Fortschritt*, No. 3, Feb. 5, 1885.

Milk, left to itself, coagulates after a few hours into an acidulous jelly. In the fabrication of cheese, this process is accelerated by the addition of rennet. In both cases, the coagulated milk owes its acidity and its specific taste to the presence of a lactophilous microbe, the milk-bacillus, millions of which, in the shape of microscopic rods, will appear after coagulation has taken place.

Only the albuminous constituent of milk, the casein, the principal component of cheese, coagulates. The milk-bacillus, as recently shown by Hueppe, does not attack the casein, but only absorbs the sugar of milk, converting it into lactic acid; hence the peculiar taste of clotted milk.

Without the presence of the milk-bacillus, milk will not turn acid. It may be preserved any length of time by immediately milking it from the udder into sterilised phials, stopped with cotton-wool. It may also be preserved by repeated boiling.

The following experiments bear upon this subject. The point of a needle is moistened with clotted milk, and inserted into one of the test phials containing sterilised milk. After a few hours the latter will be found coagulated, a sufficient number of milk-bacilli having been introduced by the needle to fertilise any quantity of milk.

By introducing other kinds of microbes, instead of the milk-bacillus, the milk will undergo a series of different alterations according to the peculiar germs.

Thus we introduce into another phial germs of the butter-bacillus; the milk will coagulate, but will be of alkaline instead of acid reaction. It will be of bitter taste, and its smell will remind one of whey or new cheese. By placing in a third phial a microscopically small droplet of blue milk, the whole contents of it will be coloured blue after a few hours. The milk, however, will be neither coagulated nor acid. A drop of it, brought under the microscope, will be found swarming with vibriones, the blue milk-bacillus described by Neelsen. When cultivated on gelatine, on potatoes, or in broth, it will germinate and colour everything blue, which is its specific peculiarity. Occasionally this microbe is accidentally introduced into dairies, from which it will be eliminated only with the greatest difficulty. The milk, however, will be neither unwholesome, nor of unpleasant taste, but it will be unsaleable on account of its blue colour.

By introducing a trace of ropy (viscous) milk into another phial, its contents will, after three days, be converted into a firm jelly, of which not a drop will escape when turning the bottle. This is due to a specific microbe, a micrococcus described by Schmidt-Mülheim, to which confectioners are much indebted for producing a tragacanth gum-like substance, which may be used for thickening jellies. This milk-jelly is very digestible, of delicious taste, and keeps, even when exposed to the air, about ten days. Therefore this valuable microbe is carefully preserved by the inhabitants of northern Sweden, and is employed for the preservation of milk, this process being cheaper than condensed milk in trade.

The experiments with the following two phials will barely meet with the approval of temperance societies. Their contents, which are of unmistakably alcoholic taste, generate carbonic acid like new wine. One of them has been treated with koumiss, the acidulous intoxicating favourite beverage of the Kirghiz, the other with the kefyr-fungus. The so-called kefyr-ferment consists of two different ferments, one similar to the yeast of wine, and a microbe, the dispora caucasica. These fungi co-exist, and conjointly produce a sparkling, gaseous, pleasant, and very wholesome beverage, which has proved of great value in nourishing children and persons who are unable to digest common milk. The kefyr is a favourite beverage in the Caucasus, and its use is rapidly spreading into Russia. Its nutritive properties are at present under investigation by medical men in Geneva.

The last experiments will not produce a gratifying result like the preceding ones; the contents of the phials have been tampered with by nocuous microbes. Already the turbid appearance and the offensive smell, like that of putrid meat, of the milk in one of the phials will prevent its use. It has been contaminated by the introduction of a specific microbe of putrefaction (the *fäulniss-microbe*, discovered by Bienstock).

The contents of the last phial are less repulsive. There is neither acidity nor unpleasant smell, nor coagulation; one might almost take it for fresh milk. But, beware! The milk has been poisoned by Dr. Koch's nefarious comma-bacillus. It appears to prosper on this genial nutritious diet, and does not betray its presence by any alteration of the milk. Only the microscope will discover the lurking danger. Fortunately this bacillus is not invested with tenacious vitality; boiling will kill it and render the milk innocuous.

Each kind of fermentation is caused by a specific kind of microbe, which, however, may be active on various substances, but always producing the same effect. Thus the putrefaction-bacillus will only produce putrefaction, whether it be cultivated on meat, in milk, broth, or grape-juice. The blue-milk bacillus will have no other but its colouring effect. The oïdium of the alcoholic fermentation will, wherever it can be cultivated, only form alcohol.

This law of stability of the physiological properties of various kinds of microbes is of the utmost practical importance.

Ferd. Ad. Junker, M.D.

Article 3767.

ALBERTI ON A CASE OF ANURIA.

Dr. Alberti, of Berlin, has lately reported (*Deutsche Zeitschrift für Chirurgie*, Band xx., Heft 6) a case treated by Professor Bardeleben, of complete suppression of urine consequent on blocking of both ureters by renal calculi, which caused death on the eleventh day, but was unattended with any marked symptoms of uræmia. The patient was a male, aged 48, very corpulent, and slightly anæmic, who for some years had suffered occasionally from attacks of gravel. On June 20, 1883, the patient noticed that he did not pass any urine; but he paid but little attention to this until June 22, when an unpleasant sensation of fulness in the chest led him to feel some anxiety, and to request surgical aid. A catheter was passed into the bladder without any difficulty, but not a drop of urine could be drawn off. On June 25, the patient came under the care of Professor Bardeleben. There was still a total absence of symptoms of uræmic poisoning, but two days later the patient complained of some debility, and his appetite began to fail. On June 28 external urethrotomy was performed, and digital exploration of the bladder practised, on the supposition that the orifices of the ureters might have been obstructed by some vesical growth. No tumour nor foreign body was found in the bladder, nor even any drops of urine. On June 29 the man became very restless, and diarrhœa now set in of fluid stools having a strong odour of decomposed urine. Death occurred on the following day, after conditions of somnolency and collapse. On examination of the abdomen after death, the left ureter at the junction of the middle and upper thirds was found completely obstructed by a large rounded calculus. The other ureter was empty, but the right renal pelvis contained a considerable number of calculi, one of which was of the size of a walnut. The pelvis of the left kidney also contained several small calculi. In his comments on this case Dr. Alberti deals, in the first place, with the singular occurrence that, notwithstanding the prolonged duration of the condition of anuria, the patient remained relatively well, and presented no symptoms of uræmia. The fact, noted for the first time on the eighth day, that the copious watery stools had an urinous odour increasing more and more in intensity, favours the assumption, it is stated, that the excrementitious material of the renal organs which, when retained in the organism, usually sets up uræmia, was eliminated by this profuse intestinal secretion. That such complementary discharge may take place in gastric and intestinal secretions, and also by the skin, has been proved by experiment and by clinical observation. It has been pointed out by Bartels, however, that some cases have occurred of prolonged anuria, in which death resulted without any preceding convulsions or coma, and in which no indication of this complementary excretion were observed.

It has been asked whether, in cases of anuria from impaction of calculi, incision of the renal pelvis, or catheterism of the ureters, might not be indicated. Both operations, Dr. Alberti points out, are formidable, for catheterism of the ureters without antecedent cystotomy is possible only on the female, and then cannot be practised on the whole length of the canal. It is a difficult question to decide when such operative interference would become justifiable, as the obstruction to the flow of urine may at any time spontaneously give way. Incision of the pelvis of the kidney would be an extremely difficult, if not an impossible, operation, if this cavity were but only slightly or not at all dilated, as is usually the case, in instances of sudden and threatening obstruction by calculi of both ureters. Moreover, if in a case of hydronephrosis, produced gradually by obstruction to the flow of urine, complete anuria be caused by sudden blocking of the other ureter, only temporary benefit can follow incision of the dilated renal pelvis; since, as Virchow has pointed out, hydronephrosis is almost always complicated with interstitial nephritis, which usually results in induration and an atrophic condition of the affected organ, and so impairs more or less its functional action. In considering this question of operative treatment in cases of anuria from obstruction, it is necessary to bear in mind that some few instances have been recorded of complete and fatal anuria, in which, on *post mortem* examination, but one ureter was found blocked, the opposite kidney, together with its ureter, being quite sound. A satisfactory diagnosis as to whether but one kidney, and, if so, which organ, is affected with calculous disease can be formed only after long observation, and under exceptionally favourable circumstances. If the anuria have come on suddenly in a patient whose urine previously had a healthy appearance and, beyond sediment, presented no abnormal constituents, and if the sudden arrest of the flow of urine have occurred without a severe attack of renal colic, it is impossible to say whether both kidneys are affected or not, how far the disease has advanced, and whether the obstruction is seated in the ureter or in the renal pelvis. Another difficulty in deciding on any attempt to remove from the renal pelvis the cause of the obstruction to the flow of urine, is the possibility that there may be but one unsymmetrical kidney, or a 'horse-shoe' fused organ. In conclusion, the author holds that, in a case of anuria from calculous impaction in the ureters, with either severe uræmic symptoms or extreme collapse, it is certainly justifiable to open the bladder by the suprapubic section, and to introduce a catheter or bougie into each of the ureters. A calculus, if fixed in the lower part of the ureter, may be thus directly removed, and, if seated high up at the renal extremity, may be detached on the injection of a stream of water.

W. Johnson Smith.

Article 3768.

PILCHER ON MALIGNANT LYMPHOMA.

At a meeting of the New York Surgical Society on Nov. 25, Dr. Lewis S. Pilcher reported two cases of malignant lymphoma. The subject of the first case was a male, aged 37 years, who consulted the author in Nov. 1880, in consequence of a tumour in the neck, which had developed rapidly and extended from the margin of the lower jaw downwards two-thirds of the way to the clavicle, and from the mastoid process forwards to the median line of the neck. This tumour, which was composed of a series of enlarged glands, was removed on Nov. 13. After an interval of two years the patient again presented himself, with enlargement of the inferior inguinal glands on the left side. This tumour, which seriously interfered with locomotion, was removed on Jan. 27, 1883. The operation was soon followed by attacks of severe pain in the abdomen, and the development of a tumour situated in front of, and to the left of, the lumbar vertebræ. Subsequently (Aug. 3) large glandular tumours on the right groin and on the left side of the neck were removed by operation.

When last seen by the author (on Sept. 27), the patient was very anæmic. There was occasional œdema of the face, with marked and persistent œdema of the outer side of the left thigh and of the scrotum. Death occurred from exhaustion on Dec. 6, 1883. In this case, from the first appreciation of any glandular enlargement to the time of death, about four years elapsed. This time is divided into three periods; first, of primary localised glandular disturbance, extending over one year, and brought to an end by the first operation; the second, a period of quiescence of about two years; the third, one of progressive anæmia, with diffuse glandular disturbance, extending through one year, and ending in death.

The second case did not present such well-marked symptoms. The patient, a lad aged 12½ years, suffered from general enlargement of the lymph-glands of the neck, and also from ulcerative laryngitis, ulceration of the mucous membrane of the pharynx and tonsils, stomatitis associated with anæmia, and extreme debility. Tracheotomy was performed in the fifth week of the disease, with a view of relieving dyspnœa and diverting the respiratory current from the ulcerated larynx. Only partial relief, however, was thus afforded, and the patient died fourteen hours after the operation.

These two cases, Dr. Pilcher points out, present the two extremes of chronicity on the one hand, and of acuteness on the other, that may be manifested by malignant lymphoma. A period of four years is far beyond the average time which intervenes between the first glandular enlargements and the final fatal termination, while a period of but little more than four weeks is quite unparalleled by any recorded case of which Dr. Pilcher has been able to find mention. Both cases, it is held, presented, clearly marked, these essential features: progressive blood-deterioration, unaffected by remedies, and advancing steadily to a fatal termination; and diffused non-inflammatory glandular enlargements. It is to be regretted that a *post mortem* examination could not be performed in the second case, as the only appreciable glandular enlargement was secondary to the ulcerative affection of the larynx and throat.

Dr. Pilcher suggests that the essential cause of malignant lymphoma is a specific infecting micro-organism, upon the growth and activity of which the blood-changes and the lymphatic glandular enlargements depend. W. JOHNSON SMITH.

ARTICLE 3769.

SANTESSON ON A DIVERTICULUM IN THE FEMALE URETHRA.*

THIS anomaly has been described by Duplay (*Archives Générales de Médecine*, Vol. vii., July 1880), who has collected notes of six cases; Foucher (*Moniteur des Hôpitaux*, 1857, p. 758); Priestley (*British Medical Journal*, 1869); Gillette (*L'Union Médicale*, April 12, 1873); Lawson Tait (*Lancet*, Oct. 1876, p. 625); and G. Simon (*Monatsschrift für Geburtsk*, xxiii., p. 245). Professor Santesson describes the case of a widow, aged 48, who in 1861 was first admitted into a hospital in Stockholm. She had suffered since a confinement twelve years previously from difficulty in micturition, the symptoms beginning with itching, heat, and pain during coitus or hard work, or when ascending a staircase. Soon a swelling filled the vagina when she passed urine, and this continued till she was admitted into hospital, with a sudden increase in the symptoms. The anterior part of the vaginal wall was distended by a smooth swelling of the size of a walnut. A catheter passed into the urethra could be made to pass into the swelling, which formed an elliptical cavity over an inch in vertical measurement, and less than an inch broad, with a smooth lining membrane. The aperture of this cavity, about the calibre 'of a middle-sized catheter,' lay at about the junction of the upper with the middle third of the urethra, the cavity lying chiefly above its outlet, against the posterior wall of the bladder. The cavity could be emptied by the catheter, which drew off urine and mucus, but on pressure from the vagina (which caused great pain) it emptied into the bladder and not out of the urethra. When the patient could not find an opportunity to pass urine, which she very frequently desired to do, the bladder at length emptied itself involuntarily, with great pain. After the removal of some vascular urethral growths, cauterisation of the entire urethra with nitrate of silver, and frequent warm baths, the patient was able to hold her urine better.

In 1863 the patient became worse. The involuntary action of the bladder, with complete emptying of the abnormal cavity, or diverticulum, became very frequent, with great difficulty during normal micturition, and pain from pressure of the over-filled diverticulum. In May 1863 the vaginal side of the diverticulum was cauterised; after separation of the eschar and healing of the wound, the circumference of the diverticulum was reduced by one half. The results of this operation were satisfactory; there was no more incontinence of urine, and the patient could hold her water for hours. In 1865 the bad symptoms returned; an elliptical piece was cut away from the vaginal wall, including the wall of the diverticulum. The edges of the wound were dissected out, and united by sutures. This operation was not rendered difficult by the existence of the scar. The wound partially sloughed, so that healing was not complete till at the end of five weeks. The diverticulum was then reduced to a simple digital depression, and felt firm and solid. Control over the passage of urine was now complete.

Four years later all the symptoms returned, and the diverticulum was larger; the patient suffered from urethritis, cystitis, and nephritis; the urethra was dilated, and its walls at the same time œdematous. The patient also had a syphilitic rash on the trunk and extremities. She did not wish for any operation, nor was any advisable, since her health was so bad. She died in 1871 in a charitable institution.

Dr. Santesson states that, if a similar case should come under his care, he would excise the diverticulum and suture the margins of the wound, retaining a catheter in the bladder for a time. The explanation of this anomaly is difficult; it seems probable that it may be overlooked in some obscure cases of incontinence of urine. It is not clear whether it be a congenital or acquired condition. Dr. Santesson believes that it is possible that pressure on the urethra during protracted labour may damage its muscular apparatus and cause the gradual development of a diverticulum, and that the same result may follow contusions from forceps and clumsy catheterisation. Simon has described cases of dilatation of veins in the urethro-vaginal septum; and this condition may damage the circular muscular fibres, and cause the septum to become very thin, and hence subject to dilatation. Spurious diverticula might arise from dilatation of cicatrices, or from the cavity of an urethral abscess that has burst into the urethra. Though such abscesses are rare in women, Dr. Santesson has observed one case, where timely opening of the abscess prevented it from bursting into that canal. Simple vaginal cysts may also burst in the same manner. Alban Doran.

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* SANTESSON. Diverticulum in the Female Urethra. (*Nordiskt Med. Arkiv.*, Vol. xvi., 1884; *Schmidt's Jahrbücher*, Vol. cciii., Part ix., Article 479.)

Article 3770.

REINL ON TEMPERATURE IN RELATION TO MENSTRUATION.[*]

Dr. Carl Reinl, physician to the International Bath Hospital at Franzenbad, has recently published, in Volkmann's *Klinische Vorträge*, the result of a valuable series of experiments on the relation of the temperature of a woman's body to the phenomenon of menstruation. Between November 1883 and February 1884 he took the temperatures of 18 women, who lived under similar conditions, these clinical researches including 18 menstruations and 13 complete menstrual cycles; in all over 29 menstruations, out of which 3 occurred in two subjects believed to have been completely castrated. He divided the complete menstrual cycle into the 'interval,' the 'premenstrual' period or four days preceding menstruation, the menstrual period, and the 'postmenstrual' period, or four days succeeding menstruation. The temperatures were taken night and morning and Dr. Reinl calculated thereupon two averages for each of the above periods, to ensure the greatest possible amount of accuracy.

In 11 out of 12 healthy cases, the cycle could be accurately represented as showing a more or less steady wave of temperature. The crest of this wave, that is to say, the highest temperature, represented the premenstrual period. In the midst of the first half of the interval the temperature was at its lowest; it then steadily rose till the second half, when the rise became more rapid, and attained its highest point at the premenstrual period. During the menstrual period, it fell steadily but rather rapidly; the fall continued, but became slower, during the postmenstrual period, and the first few days of the first half of the interval.

Various diseases and operations in the neighbourhood of the pelvic organs produced variations in the wave. In cases where no organic disease of the sexual organs could be found, but where the menstrual show was profuse, commencing after a lapse of two or less than three full weeks, and associated with marked constitutional disturbance, the menstrual period corresponded with the crest of the wave. The premenstrual rise and postmenstrual fall were always marked. In cases where local inflammation existed, the wave was, as a rule, much the same as in health, but the rise was more marked at the premenstrual period. The fall, on the other hand, was not so rapid as in health. In other words, patients with gonorrhœa, oöphoritis, or salpingitis, became more feverish towards the menstrual period, and remained so for some days afterwards. Dr. Reinl also made observations on the temperature in two cases of oöphorectomy for fibromyoma with menorrhagia, and one of removal of a dermoid ovarian tumour, the opposite ovary being healthy. In these three cases, the temperature rose during the two menstrual periods succeeding operation. In both the cases of oöphorectomy a 'show' appeared three days after operation; in one the 'show' recurred once only, in the second it never reappeared. Hence the three menstruations, described in the above statistics, as occurring in castrated subjects. These three cases are, however, insufficient for any safe deductions. Dr. Reinl does not believe that the loss of blood is the cause of the fall of temperature during the catamenia, after it has reached its height at the premenstrual period.

Alban Doran.

Article 3771.

MACPHAIL ON THE BLOOD IN THE INSANE.

To Dr. S. Rutherford Macphail has been awarded the prize given by the Medico-psychological Association for his 'clinical observations on the blood of the insane.' Dr. Macphail is assistant medical officer to the Cumberland and Westmoreland County Asylum at Garlands, near Carlisle. His essay has been published in the October and January numbers of the *Journal of Mental Science*.

The subject chosen is a good one. We have many reasons for believing that the condition of the blood has much to do with the production of insanity. We see that transient mental derangement can be readily produced by the introduction into the circulation of toxic substances, such as alcohol or cannabis; and more lasting forms of insanity follow the use of diseased rye and maize as articles of food. The mind even becomes affected by a check in the elimination of such natural products as bile and urea, and their retention in the blood. Recently, some observations have made it apparent that fatuity is liable to follow the excision of the thyroid gland, which may therefore be supposed to elaborate some material needful for the nourishment of the brain. The activity of the mind is dependent, not only upon the integrity of the nerve-tissues, but on the interchange of certain elements from the blood which circulates in large quantities through the grey matter of the brain.

With our microscopes and reagents we can learn a good deal about the appearance and composition of the nervous tissues of the brain; but it is not so easy to ascertain the condition of an organised fluid like the blood continually changing in its chemical composition, and the proportion of its globules and granules. On this account, such researches as those of Dr. Macphail should be welcomed as likely to open a new path to inquiry.

After some experiments to ascertain the normal proportion of blood-corpuscles in sane individuals by means of the hæmatocytometer and hæmoglobinometer, Dr. Macphail proceeded to examine the condition of the blood in forty cases of dementia of various ages. In this form of insanity he found the percentage of hæmoglobin below the normal standard; the percentage of hæmatocytes was likewise diminished, and the blood was found deficient in hæmatoblasts or small granule-cells. At the beginning of the second part, in the January number of the *Journal*, Dr. Macphail observes: 'While the condition of the blood-vessels has been a subject of discussion by many observers, and the state of the pulse, including sphygmographic tracings, has engaged the attention of Thompson and others, I have been unable, in the literature to which I had had access, to find reference to any observations on the state of the blood in this disease.'

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[*] Reinl, Dr. Carl.—*Die Wellenbewegung der Lebensprocesse des Weibes.* (The Wave-movement of the Vital Processes in Woman.) Volkmann's *Sammlung Klinische Vorträge*, No. 243.

It is clear that Dr. Macphail's attention has not been directed to the Italian periodicals on insanity. In the *Rivista Sperimentale di Freniatria* (Anno X., Fasc. i. ii.) there is a summary of the observations of Dr. Seppilli on the blood of the insane; and in *La Psichiatria* (Anno II., Fasc ii.) there is some account of the experiments of Dr. B. R. Pietro on the heart, pulse, and globulometry of the insane. Seppilli has six observations on the blood in general paralysis; Pietro nine. Their results do not differ from those of Dr. Macphail, who found the percentage of hæmoglobin and the red corpuscles diminished and altered in appearance in general paralysis; and this deterioration progresses along with the march of the disease. Apparently, the results obtained are what might have been expected on the assumption that insanity is a disease which depresses or exhausts the strength and vital powers of the patient. On admission, and during the course of the insanity, the blood was found to be deficient in hæmoglobin and in red corpuscles; on recovery, the patient became richer in hæmoglobin and in hæmatocytes. Dr. Macphail, however, observed that the hæmatocytes were above the usual standard in melancholia, while the hæmoglobin was below. The highest percentages of hæmoglobin and hæmatocytes were found in three cases of acute mania, and in one of *delirium tremens*. Seppilli found in most cases of true maniacal excitement, a blood as rich in corpuscles as in the normal condition. In pellagrous insanity, a form unknown in Britain, diminution in blood-corpuscles and hæmoglobin was most marked. Dr. Pietro has found hypertrophy of the heart very common with those who have died insane; but of forty-eight examinations he found hypertrophy in forty-three cases. He believes that this condition commences in the right ventricle, which he attributes to changes he has observed in the ganglia of the sympathetic. The following are amongst the conclusions with which Dr. Macphail closes his essay.

There appears to be a close connection between gain in weight, improvement in the quality of the blood, and mental recovery.

While there is a definite improvement in the condition of the blood during mental convalescence in all cases, the improvement is both more pronounced and more rapid in those who have had tonic treatment.

The four tonics which either alone or in combination proved most efficacious in restoring the quality of the blood, as shown by these observations, may be classed in order of value thus:—(*a*) iron, quinine, and strychnia; (*b*) iron and quinine; (*c*) iron alone; (*d*) malt extract.

Arsenic proved of little value as a blood-tonic in these cases, and the observations with quassia and cod-liver oil did not give satisfactory results.

In conclusion, Dr. Macphail remarks that 'this line of clinical research, more especially with reference to the curative treatment of the insane, should have more attention paid to it than has hitherto been the case.' We hope that the encouragement which Dr. Macphail has already received will stimulate him to pursue with unfaltering zeal and diligence such a promising line of research.

W. W. IRELAND, M.D.

ARTICLE 3772.

COULSON ON INTERNAL URETHROTOMY.

IN the *Brit. Med. Jour.*, September 1884, p. 558, a report is given of a paper read by Mr. Walter Coulson at the annual meeting of the British Medical Association, on the treatment of stricture of the urethra by internal urethrotomy, with a review of the different methods. Many methods are employed for the cure of stricture; the four most important being dilatation, rupture, external and internal urethrotomy. With regard to dilatation, either gradual or continuous, it is, of course, the simplest and the safest method, but in old standing indurated strictures it is found to be inefficacious. Rupture of a stricture is open to many objections, and often gives rise to contractions as resistant as strictures of traumatic origin. With regard to external urethrotomy, the operation known as Syme's is generally very satisfactory, but it should be reserved for severe traumatic cases, and for cases complicated by perineal fistulæ and abscess. Having briefly disposed of the above operations, the author describes that of internal urethrotomy. The urethrotome used is a modification of Maisonneuve's, improved by Sédillot, Gouley, and in particular by Mr. Teevan. The operation is performed in the following manner. A fine flexible guiding bougie, equal in size to No. 4 or 5 F. is passed into the bladder. The staff or sheath of the urethrotome is then screwed on to the guide, passed through the stricture into the bladder, and held in position by an assistant. The operator, with his left hand, seizes the penis just behind the glans and draws it forwards; with his right hand he pushes the stem of the sheathed knife of the urethrotome down the urethra until the obstruction is reached; the knife is then protruded, and all resisting tissue in front of it is divided. The incision is thus made in the roof of the urethra. The knife is then withdrawn into its sheath, which is pushed along the urethra in order to ascertain that the division has been complete. If it be so, the instrument is immediately withdrawn. A full-sized silver catheter is then passed; the bladder is emptied, and the catheter at once withdrawn. Immediately after the operation, the patient remains in bed; hot bottles are applied to the feet, and 3 grains of quinine are given with half an ounce of brandy. A little warm beef-tea is also given from time to time. If no rigors occur, the patient has a hot bath at night, and forty-eight hours afterwards a French bougie, corresponding in size to the catheter used after the operation, is passed along the urethra. The patient is then allowed to get up. The bougie is passed every three or four days; and, at the end of ten or fourteen days, the patient is taught to use the instrument himself, and instructed to use it once a week constantly. As to the results of the operation, the author states that, out of 206 cases, for which internal urethrotomy has been performed at St. Peter's Hospital, only ten terminated fatally. In cases that recover, a permanent and radical cure will result, provided that the stricture has been sufficiently divided to allow the introduction of a full-sized instrument, and that the patient has learnt the art of passing the bougie himself. In many cases, an anæsthetic is not needed. Where there is severe renal mischief, the operation must not be attempted. Mr. Coulson then sets forth the advantages of Mr. Teevan's urethrotome over that of Civiale's. The advantages are these. 1. Teevan's urethrotome can be passed through very tight narrow strictures, whereas with Civiale's instrument one must previously dilate to No. 5 (English). 2. In Teevan's instrument it is known by withdrawing the stilet, and getting urine to flow, that the instrument is in the bladder; but with Civiale's the surgeon does not know whether he is about to cut the urethra or a false passage. In Teevan's urethrotome the incision is made from before backwards, in the roof of the urethra; with Civiale's it is made from behind forwards in the floor of the urethra.

RICHARD NEALE, M.D.

ARTICLE 3773.

SAUTER ON PRESERVING AND EMBALMING BODIES.

A. SAUTER describes (*Der Fortschritt*, No. 3 Feb. 5, 1885) several cheap and easy methods of preserving and embalming bodies. If only a temporary retardation of putrefaction and decomposition be required, the filling up of the coffin with sublimated wood-wool will answer better than any other means, being at the same time easily procured and prepared. Common wood-wool, which may be purchased of any surgical-dressing manufacturer, is treated with a solution of one part of bichloride of mercury, 100 of alcohol of 5 to 10 per cent., and dried for use. Instead of wood-wool, common sawdust prepared in the said manner will likewise answer. The corpses ought to be previously washed with the same solution, diluted with ten parts of water.

The best and easiest manner of embalming consists in gradually injecting, under gentle pressure,the preservative fluid into the carotid artery by means of an Esmarch's irrigating-can or by a larger ordinary injecting-syringe. The quantity required will vary between six to eight pints (three or four litres), consisting of one part of carbolic acid, ten of glycerine, fifty of alcohol, and forty of water. This fluid will preserve the body, and retain the epidermis for several days. If, however, it be desired to keep the corpse in perfect condition for several months or longer, this must be followed by a second more copious injection of one part of chloride of zinc and three parts of water, slightly tinged with fuchsin or with a saturated neutral solution of sulphate of aluminium coloured with cochineal. After having injected the whole quantity of the fluid (about ten to sixteen pints), the carotid artery and the jugular vein must be tied. The surface of the body may be lubricated with vaseline or covered with varnish of sandarac, to which 1 per cent. of carbolic acid is added. The cavities of the body are filled with sublimated wood-wool, or with cotton-wool soaked in glycerine containing 5 per cent. of carbolic acid.

These methods of preserving corpses will neither require unusual skill nor enhance great expenses.

FERD. AD. JUNKER, M.D.

SURGERY.

RECENT PAPERS.

3774. WHITEHEAD.—Excision of the Cæcum for Epithelioma. (*Brit. Med. Jour.*, Jan., p. 171.)

3775. MORRIS.—Calculus Impacted in the Ureter. (*Amer. Jour. of Med. Sciences*, Oct.)

3776. BUCHANAN.—Compound Dislocation of the Semilunar Bone of the Carpus. (*Med. Times and Gaz.*, Jan., p. 113.)

3777. ALEXANDER.—A Remarkable Case of Self-inflicted Wounds. (*Lancet*, Jan., p. 178.)

3778. GARDNER.—A Case of Bullet-wound of the Skull: Recovery. (*Lancet*, Jan., p. 61.)

3779. BUCHANAN.—A Case of Aneurysm of the Upper Third of the Brachial Artery. (*Lancet*, Jan., p. 147.)

3780. ESHELBY.—The Treatment of Foul Wounds by Hot Air. (*Lancet*, Jan., p. 178.)

3781. TEALE.—The Surgery of Scrofulous Glands. (*Med. Times and Gaz.*, Jan., pp. 35–71.)

3782. BARKER.—Cases Illustrating Renal Surgery. (*Lancet*, Jan., p. 95.)

3783. BARWELL.—A Cheap Form of Artificial Leg. (*Brit. Med. Jour.*, Jan., p. 66.)

3784. WHEELHOUSE.—Pent-up Secretions. (*Brit. Med. Jour.*, Jan., p. 1.)

3785. SIMONENA.—A Remarkable Case of Osteogenic Diathesis. (*La Gaceta Medica Catalana*, and *El Siglo Medico*, Jan. 1885.)

3786. CATTANI.—Experimental Researches on the Bloodless Stretching of Nerves. (*Gazz. degli Ospitali*, No. 4, 1885.)

3787. SÄNGER.—Desmoid Tumours of the Abdominal Wall and their Removal with a Portion of the Peritoneum. (*Archiv für Gynäkologie*, vol. xxix., part 1.)

3788. SMIRNOFF, M.—On the Treatment of Epididymitis in Sailors. (*Med. Pribavl. k'Morsk. Sborn.*, Dec. 1884, pp. 20–21.)

ART. 3774. *Whitehead on Excision of the Cæcum for Epithelioma.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 171, Mr. W. Whitehead gives in detail the notes of a case in which he excised the whole of the cæcum for epithelioma. The patient was a man aged 38, who had suffered, for eighteen weeks before admission into the Manchester Infirmary, from diarrhœa and pain in the right lumbar region. On examination there was found a mass in the right lumbar region, about 4½ inches long by 3 inches broad. The tumour was freely movable, and the clinical diagnosis made was, a tumour of the colon in the vicinity of the cæcum, probably epithelioma. It was decided to remove the whole disease by an incision along the outer border of the rectus muscle, in preference to that for lumbar colotomy, by this means affording more room for exploratory purposes. The operation was performed most successfully. The whole mass was taken away, entailing the removal of the last two inches of the ileum, the cæcum with the vermiform appendage, and the greater part of the ascending colon. The cut end of the small intestine was stitched to the lower edge of the wound, and the colon was stitched to the upper edge. The remaining portion of the wound was next brought together by strong silver wire passed through the skin, muscle, and peritoneum, the surface of the wound being dressed with iodoform. The patient did very well for about ten days after the operation, but peritonitis then set in, and death took place on the thirteenth day. The author remarks that the patient did not die from the immediate effects of the operation, and the *post mortem* examination showed that the whole disease was removed. The operation is serious, and should only be undertaken in cases where there is hope of giving permanent relief, but in cases where there is only a chance of relieving symptoms temporarily, the operation of colotomy should be performed. [In the *Medical Digest*, sect. 884: 3, a case is reported where the cæcum was removed by mistake for rectal polypus, the patient making a good recovery. Mr. Sydney Jones also excised the cæcum: vide *Lancet*, Jan. 1885, p. 60.]

3775. *Morris on Calculus Impacted in the Ureter.*—Mr. Henry Morris, in the *American Jour. of the Med. Sciences*, contributes a short paper with reference to operative interference in cases of calculus impacted in the ureter. The author records the case of a lady who died with all the symptoms of renal calculus. Three days before her death he made a digital exploration of the bladder, and felt a small hard substance under the mucous membrane, in the region of the orifice of the left ureter. The patient would not consent to an operation, though the author proposed to remove the calculus. Since then he has devised a long-handled, gun-shaped lancet, with which in similar cases it is proposed to make an incision through the mucous membrane of the bladder on to the stone, which could then be easily removed with the scoop. It is strongly urged that, in cases of hydro- or pyo-nephrosis, an examination of the bladder should be made before nephrectomy is performed.

3776. *Buchanan on a Case of Compound Dislocation of the Semilunar Bone of the Carpus.*—In the *Med. Times and Gaz.*, Jan. 1885, p. 113, Professor George Buchanan details a case of compound dislocation of the semilunar bone occurring in a man aged 28, who had fallen from a height of 20 feet, and had alighted partly on his right hand. When seen by the author, there was a deep lacerated wound at the lower part of the forearm just above the wrist, with considerable cellulitis round the lower part of the forearm. A small round bone was felt at the bottom of the wound. This was removed, and proved to be the semilunar bone. Behind this, the styloid process of the radius was found to have been obliquely broken off from the shaft, and considerable suppuration existed among the deep tissues. Free incisions were made for the relief of tension, and drainage-tubes were inserted for securing good exit of pus and sloughs. After ten days it was found that the whole of the carpal bones were denuded of cartilage, and besides this an abscess had appeared in the axilla. The author at once decided to amputate in the forearm. This was done, and a free opening was made into the abscess in the axilla. The patient made a rapid recovery. [In sect. 1,744 : 3 of the *Medical Digest* may be found a case where Mr. Chisholm resected the bone with success. In the *Lancet*, Oct. 1884, p. 885, Mr. Cameron reports a case of dislocation of the semilunar bone.—*Rep.*]

3777. *Alexander on a Remarkable Case of Self-inflicted Wounds.*—In the *Lancet*, Jan. 1885, p. 178, Surgeon-Major Alexander narrates the following case bearing on some recent remarks made concerning the convict Mrs. Gibbons. In 1875 the author was sent for hurriedly to see an officer, whom he found lying on a couch with two incised wounds on the front of the abdomen, and one similar wound on the back, near the spine. Twenty-six incised wounds were found about the left breast, both hands were dreadfully mutilated, and lying close to the officer was a sword covered with blood and bent to an angle of 45°. The patient lived for several hours, and told the author how he had inflicted all these wounds upon himself. Had this gentleman been found dead, it would have been very hard for a jury to give a verdict of suicide, as such unusual power of self-mutilation is uncommon.

3778. *Gardner on a Case of Bullet-wound of the Skull: Recovery.*—In the *Lancet*, January 1885, p. 61, Mr. Gardner records the notes of a case of bullet-wound of the skull in a labourer, aged 28. A bullet, weighing 3 drachms, entered the left eyebrow, about half an inch outside the supra-orbital notch. A quarter of an hour after the accident the patient was brought to the hospital, quite conscious. A small fragment of lead, and a piece of bone about the size of a millet-seed, were extracted. Several loose pieces of bone could be felt by means of a probe, but no bullet. The wound was dressed with lint soaked in carbolic oil, and ice was applied to the head. Every time the patient moved, blood oozed from the wound, and, though restless during the night, he remained quite conscious. He continued fairly well for seven days, when he became drowsy at times, and suffered somewhat from constipation, but the temperature remained normal. The pupils also became unequal, but regained their natural appearances after three or four days. Fourteen days after the accident the patient seemed quite well, and wanted to get up, but on the following day the left upper eyelid became swollen, and a small abscess was opened, evacuating a few drops of very offensive pus. After some days the constipation was relieved, and the patient improved in his general condition, but the wound was still discharging. Four months after the injury, a report is given stating that the patient's intellect was clear in every point, and that there was not the slightest trace of paralysis anywhere, nor of any symptoms of irritation of the brain. The author remarks that the points of interest in the case are: 1. the absence of all meningeal or cerebral inflammation, although the dura mater was shot through and irritated by numerous particles of bone; 2. the obstinate constipation; 3. compression of the brain, probably by the bullet, the temperature remaining normal, so excluding any compression from inflammatory effusion. The sequel of the case is given in the *Lancet* at p. 154. The patient continued quite well until January 1, 1885, although the wound was not healed, and at this time there was considerable pain in the head with sleeplessness, with vomiting, and obstinate constipation, ending gradually in coma, the patient dying on January 11. The *post mortem* examination disclosed a blackened surface under the dura mater, at the anterior aspect of the left frontal lobe, from which very fœtid green coloured pus escaped. There was no trace of inflammation of the dura mater lining the base of the skull. The mass of the frontal bone projected on the inner surface of the wound, and pressed directly on the brain at a spot corresponding to the blackened surface of the left frontal lobe. On removing some loose pieces of bone to which the brain was adherent, a cavity was opened in which lay the bullet, buried in the mass projecting from the back of the frontal bone and resting on the orbital plate of the frontal bone. The whole of the left frontal lobe was converted into an abscess containing three or four ounces of fœtid pus. The rest of the brain was healthy.

3779. *Buchanan on a Case of Aneurysm of the Upper Third of the Brachial Artery.*—In the *Lancet*, January 1885, p. 147, Mr. G. Buchanan records the notes of a case of spontaneous aneurysm of the brachial artery, occurring in a labourer aged 31; a swelling had commenced in the armpit without any assignable cause about four months before the patient came under the care of the author. The aneurysm was about the size and shape of a hen's egg; the upper end came close up to the axilla and felt very soft, but could be lifted off from the artery, which could be felt beating distinctly in its normal situation just where the axillary ended. The heart was much enlarged, and there was a systolic aortic murmur. It was decided to ligature the axillary artery; this was done on December 19 most successfully, and all went well until noon, December 22, when it was noticed that blood was oozing from the dressings. The author was sent for, and, on arriving, finding the patient partly under chloroform, the wound was opened and the clots turned out, when it was seen that the artery was bleeding from a point about half an inch above the ligature; another ligature was placed, with difficulty, just above the bleeding point, the wound dressed antiseptically as before, and the patient removed to bed, where he was carefully watched. On the morning of December 24 hæmorrhage again occurred, and the arm was amputated at once at the shoulder-joint. The patient never rallied from the operation, but died on the morning of December 27. The *post mortem* examination showed that the aneurysm was fusiform. The heart was found to be of twice its normal size, with numerous vegetations on the aortic valves, and general degeneration of the arteries all over the body.

3780. *Eshelby on the Treatment of Foul Wounds by Hot Air.*—In the *Lancet*, Jan. 1885, p. 178, Dr. Eshelby writes that on reading Mr. Leighton Kesteven's paper on antiseptic steam irrigation of foul wounds, he was induced to describe a method of treatment by hot air which the author has himself used for some years in cases of chronic, indolent, and varicose ulcers. The plan is as follows. A box is constructed of well-seasoned wood, the floor consisting of three layers about an inch apart from one another. The outer one, of stout sheet zinc or tin plate, is that against which the flames of the spirit-lamps impinge; the middle is of perforated zinc; and above that is a wooden floor, also perforated by numerous holes. The apparatus is placed on the bed, and the limb is put into the box; two or three spirit-lamps are lighted under the zinc plate, and the temperature is raised within the box to as great a height as the patient can comfortably bear, and maintained for two hours; the process being repeated morning and evening. The wound is well cleansed by syringing with boracic acid before the limb is placed in the box, and after it is removed it is covered by a small piece of lint (just a little smaller than the sore) soaked in boracic acid. If the wound be very offensive, a little terebene should be sprinkled on the floor of the box, and in syphilitic cases calomel may be sprinkled on the zinc floor. The most obstinate cases of chronic ulcer have yielded rapidly to this treatment.

3781. *Teale on the Surgery of Scrofulous Glands.*—In the *Med. Times and Gazette*, Jan. 1885, pp. 35 and 71, Mr. Pridgin Teale contributes a most valuable lecture on the surgery of scrofulous glands, together with the history of nineteen cases in which he operated with complete success. The lecturer points out how cases of scrofulous glands can be cured by making an incision over the diseased gland, and then scraping away the entire caseous mass by means of Lister's scraper. The wound is then thoroughly cleansed by carbolic acid solution 1 in 40, or by carbolised glycerine 1 in 10, and afterwards it is charged with iodoform. An India-rubber drainage-tube, reaching to the farthest recess of the wound, is inserted, and the edges of the wound are carefully brought together by fine catgut sutures; a pad of salicylic acid is placed over the wound; and, if the gland have been completely enucleated, the drainage-tube may be removed at the end of a week; but, if not, the rubber tube must be replaced by gilt wire, which should remain until there is reason to suppose that all is healed except the track of the tube. This period will vary from three to eight or ten weeks. The author illustrates by cases a most important point, which must always be very carefully looked to—viz., a case may present itself as a soft suppurating swelling behind the ear. This, however, does not heal if an incision be made into it, the reason being that the caseating gland, causing the abscess, is seated under the deep cervical fascia, and perhaps even under the edge of the sterno-mastoid. The opening must be carried right to the situation of the diseased gland, which must then be well scraped, and drained from the very bottom of the wound. The scar from this mode of operating is linear, and not unsightly, quite different from the puckered scar one sees in cases that have been left to get well by themselves. [Chassaignac, in 1856, freely adopted the plan of excising scrofulous cervical glands, and since that time the practice has been extensively adopted, as a reference to sect. 130:6 of the *Medical Digest* will at once show.—*Rep.*]

3782. *Barker on Cases of Renal Surgery.*—In the *Lancet*, Jan. 1885, p. 95, a lecture is printed, which was delivered by Mr. A. E. Barker at University College Hospital, on cases illustrating renal surgery. The lecture contains a complete history of a most interesting case of excision of the kidney for ruptured ureter and urinary abscess, in a child, aged 3 years and 8 months. The child recovered and left the hospital seven weeks after the operation, with only a small sinus in the side, and in good health. The case is unique as regards the opportunities it offered for observation. The injured ureter prevented the flow of urine from the right kidney, so that it formed a large tumour in the side, which was aspirated from time to time, and the urine thus obtained was carefully analysed. The healthy kidney secreted urine in which the percentage of urea corresponded with the amount of nitrogenous foods in the diet, whilst the urine secreted by the injured kidney, and which was drawn off by the aspirator, contained very little urea, but from 25 to 50 per cent. of albumen; this albumen was no doubt derived from the serum and lymph secreted from the walls of the sac. Complete tables are given, showing the analysis of the urine from the injured and uninjured kidney from day to day, and also a record of the urine secreted by the left kidney for some days after the removal of the right kidney.

3783. *Barwell on a Cheap Form of Artificial Leg.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 66, Mr. Richard Barwell describes a form of artificial leg invented about the year 1847 by the Comte de Beaufort, and which has come into use on the Continent since about 1870. Two forms exist—one for amputation below, the other above, the knee. The former consists of—1, a wooden foot, soled, and partly covered with leather; 2, two uprights of beechwood, curved to the form of the leg, when seen from before or behind, and provided with a knuckle-joint in the position of the knee; 3, between the uprights are leathern sockets, laced up in front, one for the thigh, the other for the shank or stump. The price at which these limbs can be supplied is said to be 3*l.* 3*s.* for amputation below, and 3*l.* 13*s.* for amputation above, the knee. Mr. Schramm, of Belmont Street, London, has undertaken to supply these appliances at the above prices, provided he can obtain orders for a large number.

3784. *Wheelhouse on Pent-up Secretions.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 1, Mr. Wheelhouse contributes a most interesting lecture on the subject of 'Pent-up Secretions.' The lecture is illustrated by typical cases showing the way in which most distressing symptoms may sometimes be relieved, if it be discovered that some secretion is pent up, and this secretion be evacuated. The case of a young gentleman is narrated, to whom the author was called, and found on the point of suffocation. On physical examination it was discovered that the left pleura was full of fluid. A Roberts's trocar was thrust into the side, and six pints of clear fluid were withdrawn, giving instant relief. Another time, Dr. Clifford Allbutt called the author to a case of acute rheumatic fever. The patient was dying from acute pericardial effusion; a small trocar and cannula was thrust along the upper margin of the fourth left rib, the serum was drawn off, and the patient soon recovered. A third case is given in outline, where a young lady of wealth, living in a mansion surrounded by everything conducive to health, yet constantly suffered from what was supposed to be well-marked blood-poisoning. At length the patient's regular medical attendant decided to inquire fully into the question of the 'periods,' and, on examining a diaper, found that there was only a small amount of 'fœtid' discharge upon it. A second opinion was obtained, and an examination, under ether, was insisted upon. It was then found that the patient had a hymen so nearly perfect, that only a tiny aperture existed to permit the exit of the natural excretion. On freely dividing the membrane, the vagina was found converted into a distended sac, its walls being granular and over-vascular, thus presenting a very large absorbing surface. A few months sufficed to make a complete and perfect cure of all her troubles. The most remarkable advance made in the treatment of cases of phthisis is the method of opening phthisical cavities through the back, and draining them by means of drainage-tubes, thus relieving the cough and fœtid expectoration.

RICHARD NEALE, M.D.

3785. *Simonena on a Remarkable Case of Osteogenic Diathesis.*—The case described is that of a man of 40, in whom, at the age of 8, the lesion of the left hand began in the joints, attacking first the ring-finger, then the index, and later the second finger, and lastly the little finger; the thumb was still scarcely affected. The lesion began by swelling of the epiphyses of the phalanges, at first smooth, later unequal, and finally affected the diaphyses. Three months ago erysipelas of the hand appeared and lasted eight days, resulting in the fusion of the osseous tumours and the formation of abundant sanguineous pus. Deep caverns remained, from which on each dressing issued a cupful of pus. Of more recent date was a tumour, also osseous, of the size of a small orange, on the right index-finger. This commenced like those of the left hand, and also followed a slow growth. Analogous lesions had also appeared at various times on the feet. The index of the left hand measured 35 centimètres in circumference at its largest part; near the nail was a concave surface, 4 centimètres in radius; in the centre of this surface was an oval opening leading to a cavity from 4 to 6 centimètres deep. The second finger was flexed and inclined backwards and inwards, so that the nail rested on the dorsal face of the ring-finger; at the articulation of the second phalanx with the first there was an opening 4 centimètres deep; the ring-finger, also bent, presented at the level of the first articulation of the phalanges a swelling of the size of an apple. The little finger was less deformed, but the epiphyses were much swollen. The thumb was almost normal, and there was no deformity of the metacarpal bones. Amputation was performed at the middle third of the forearm. The weight of the hand was found to be 2,725 grammes, or nearly 6 lbs.

G. D'ARCY ADAMS, M.D.

3786. *Cattani on the Bloodless Stretching of Nerves.*—The author has made several experiments on rabbits in Professor Tizzoni's laboratory, to see whether nerves can be stretched by forced extension of limbs and to compare the results obtained in this way with the results obtained in the ordinary way by stretching the nerve on the fingers or on an instrument after it has been laid bare. The sciatic nerve of the rabbit was stretched by extending the leg on the thigh, and keeping the limb in this position by flexing the thigh until the foot touched the animal's neck. The histological changes following this procedure were identical with those following the ordinary method. In many nervous fibres, especially the large ones, the cylinder-axis was broken here and there at various distances; the medullary sheath showed spaces more or less extended, especially in the neighbourhood of Ranvier's nodes. To these first lesions succeeded degeneration and disappearance of the medullary sheath and of the cylinder-axis, with increase of the protoplasm and with proliferation of the nuclei. Regeneration followed degeneration. A remarkable difference was observed, according to the mode of stretching employed. In the ordinary mode of stretching by laying bare the nerve, the effects were mostly confined to the point where the mechanical force was applied. In stretching by forced position of the limb, the degeneration was found to extend even to the peripheral branches. In this latter plan also, proliferation of connective tissue was absent; and hæmorrhage from rupture of small vessels was rare or absent. In both methods, the alteration in the function of the nerve consisted almost entirely in a considerable diminution of sensibility; mobility being impaired only slightly and for a short time. Stretching by forced position of the limb, when the nerve admits it, is to be advised when it is desired to affect the peripheral branches.

WILLIAM R. HUGGARD, M.D.

3787. *Sänger on Fibrous or Desmoid Tumours of the Abdominal Wall.*—Dr. Sänger, after describing a case, lays stress on the necessity of removing the adjacent portion of parietal peritoneum when it is thinned and adherent to the capsule of the tumour, since any attempt at enucleation under these circumstances involves free and even dangerous hæmorrhage. On the other hand, the free removal of the adherent serous membrane appears in no way to increase the mortality of the operation, nor, according to Dr. Sänger, does it increase the chance of a ventral hernia after the removal of the tumour. As experiments on animals have proved, adhesions form between the raw surface on the abdominal parietes and the visceral peritoneum—[hardly desirable from any point of view?—*Rep.*], without the development of epithelioid tissue over the area of the gap in the peritoneum. On the same principle, the removal of portions of the serous coat of the abdominal viscera may be quite justifiable in certain operations; the healing process is the same, whether aponeurotic, muscular, or connective tissue fill up the raw surface. This process never seems to involve impairment of the peristaltic function of the intestines, since it need not involve the muscular fibres of the bowel. In the case of small fibrous tumours of the abdominal walls, inseparably connected with the peritoneum, Dr. Sänger recommends a method of operating already carried out, to a certain extent, by Guérin. The tumour is exposed and drawn forwards, and a stout catgut ligature is tied around its base, the ligature of necessity including the adherent peritoneum tightly constricted like the neck of a money-bag. The pedicle thus formed is then cut away on the peritoneal side of the ligature, and the cut surfaces of the parietal peritoneum left behind are then united by sutures. These tumours are generally pure and firm fibromata; other forms of new growth are the exception. They appear to arise from the lineæ tendineæ of the rectus abdominis muscle, or from the abundant tendinous and aponeurotic tissues in the abdominal walls. As they never occur in children, and are especially common in women who have been frequently pregnant, it is possible that their formation is in some measure due to passive stretching of the abdominal muscles, tendons, and aponeuroses. Yet, in some cases, it is impossible to determine the exciting cause of the tumour. Diagnosis is not always easy, especially if the tumour be large. [The reporter has seen more than four square inches of peritoneum carefully peeled off a large fibro-sarcoma of the abdominal walls and several large vessels secured, with the very best results. No doubt the danger of removing some of the parietal peritoneum is trifling as far as relates to recovery from the operation; but it is certainly best to leave the serous membrane intact if possible.—*Rep.*]

ALBAN DORAN.

3788. *Smirnoff on the Treatment of Epididymitis in Sailors.*—In the *Med. Pribavl. k' Morsk. Sborn.*, Dec. 1884, p. 20, Dr. M. Smirnoff, surgeon on board the *Plastron* (with 163 men), writes that during her cruising from 1880 to 1883, not fewer than sixty-nine cases of acute gonorrhœa came under his observation, fifteen of them (in twelve patients) being complicated with epididymitis of the right testis in six cases, of the left in nine. The duration of epididymitis varied between ten and thirty-four days, with an average of eighteen days. With the disappearance of acute symptoms (in three to five days) the patients resumed their full active work. The treatment in the acute stage consisted in inunction of a mixture of equal parts of grey mercurial and belladonna ointments; later on, warming compresses were applied. The patients wore a suspensory during the whole course of the disease. Except the omission of *vodka* (aquavitæ), no changes in the usual dietary (of the Russian sailor) were made. The same treatment was practised with identical results also by Dr. Gubareff, on board the *Africa*, and by Dr. Bogoslovsky, on board the *Vestnik*.

V. IDELSON, M.D.

MEDICINE.

RECENT PAPERS.

3789. ZASETZKY, PROFESSOR N. A.—On the Contagiousness of Pulmonary Phthisis. (*Vratch*, No. 47, 1884, pp. 797–8.)

3790. BURDER.—The Etiology of Catarrh. (*Bristol Med.-Chir. Jour.*, No. 6.)

3791. MACDOWALL.—On Scurvy. (*Lancet*, January, p. 118.)

3792. HAYWARD.—Periostitis following Typhoid Fever. (*Brit. Med. Jour.*, January, p. 16.)

3793. WEISS.—A New Treatment of Enlargement of the Thyroid Body. (*Berlin. Klin. Wochensch.*, No. 2.)

3794. RIEGEL.—On Diseases of the Stomach. (*Arch. für Klin. Med.*, Band xxxvi., p. 100.)

3795. DE RENZI.—Incontinence of the Pylorus. (*Riv. Clin. e Terapeutica*, Fasc. i., 1885; *Riv. Clin. di Univ. di Napoli*, No. 1, 1885.)

3796. SPANNOCCHI.—Addison's Disease. (*Gazz. degli Ospitali*, Nos. 5 and 6, 1885.)

ART. 3789. *Zasetzky on the Contagiousness of Pulmonary Phthisis.*—In the *Vratch*, No, 47, 1884, p. 797, Professor N. A. Zasetzky, of St. Petersburg, contributes a case which, according to his opinion, unmistakably speaks in favour of the theory of the contagiousness of pulmonary phthisis. A lady, a member of a highly phthisical family (her father, two paternal uncles, a paternal aunt, a brother, and three sisters having died from phthisis), and herself suffering from emaciation, dyspnœa, cough, and occasional hæmoptysis, cohabited during the period from 1872 to 1883 consecutively with three men, all of whom were previously healthy and were members of respective healthy families. The first husband of the lady, to whom she had been married in 1872, died from pulmonary phthisis in 1879. The second, with whom she lived from 1879 till 1881, died from phthisis in 1883. In the same year, the lady herself died from the same disease. Her third husband, with whom she lived from 1881 to her death, is now in the last stage of phthisis. V. IDELSON, M.D.

3790. *Burder on the Etiology of Catarrh.*—In the *Bristol Med.-Chir. Jour.*, No. 6, Dr. Burder points out the similarity of the symptoms in a common cold and in epidemic influenza, as supplying *primâ facie* evidence that they are one and the same disease. The author gives three reasons for objecting that any given cold is caught by exposure to a draught on a particular occasion. 1. The cause assigned seems altogether inadequate to the effect produced. 2. The sense of chilliness, which constitutes the 'catching cold' in the patient's imagination, is in reality the first manifestation of the disease. 3. Exposure to cold may excite sneezing, but the sneezing may have nothing to do with catarrh. The author finds by personal experience that catarrhs are more frequent during the months of February, March, and April, and thinks that if 'getting wet' be an influential cause of catarrh, it is difficult to see why catarrhs should be most frequent when rainfall is least. Finally, he expresses his belief that catarrh is due to an organism, which, unlike many of its species, thrives in cold weather and languishes in heat.

3791. *Macdowall on Scurvy.*—In the *Lancet*, Jan. 1885, p. 118, an article alludes to an interesting paper on scurvy, received from Brigade-Surgeon Cameron Macdowall. The author controverts the statement that certain of the hill tribes in India live altogether without vegetables, and yet are free from scurvy. He says they do make use of vegetables, and that cases of scurvy do occur among them. The author also criticises Dr. William Neale's experiences in the late *Eira* Arctic expedition as to the value of fresh meat as an antiscorbutic. The *Lancet* does not agree with this depreciation of fresh meat rations as a prophylactic; and experience has shown also that too much reliance must not be placed on preserved vegetables, as the crews of many of the whalers suffer from scurvy, though they are well provided with the best kinds of Dutch preserved vegetables. The *Lancet* agrees with Dr. William Neale in stating that the antiscorbutic properties of vegetables and meat depend upon their freshness. In a hot climate meat undergoes rapid changes, whereas in the Arctic regions the meat is frozen within a few minutes of the death of the animal killed, and therefore the blood and the tissues retain their chemical properties for many weeks, provided they are kept at a temperature some degrees below freezing point.

3792. *Hayward on Periostitis following Typhoid Fever.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 16, Dr. J. D. Hayward writes that periostitis, as a sequela to typhoid fever, is more common than is generally supposed. The author suggests that this local inflammation is due to the tendency to degenerate changes induced by the exhausted condition of the system after a severe enteric fever. Or, there may be a septicæmic origin in some cases, just as some of the instances of parotitis, marasmus, and phthisis after enteric fever are supposed to arise. In a late number of *Le Progrès Médical*, Routier divides these cases into those where only the external layer of periosteum is affected, those that are only subperiosteal, and those where the bone is also affected. The author states that he has never seen one of the latter class, and remarks that all the cases which he has seen have been young persons, where the growth of bone is possibly not completed, and the active condition of the periosteum may in this way predispose to inflammation of the part. [A reference to section 1498 : 6 of the *Medical Digest* will show that periostitis, as a sequela to typhoid fever, has not escaped previous notice.—*Rep.*]

RICHARD NEALE, M.D.

3793. *Weiss on a New Treatment of Enlargement of the Thyroid Body.*—This method (*Berlin. Klin. Wochensch.*, No. 2) consists in touching the skin over the tumour with a small Paquelin's cautery, held like a pen. Touches with this instrument are made in horizontal rows, the rows being about one centimètre apart, and the touches in each row being close together. If the cautery be at a white heat, the procedure causes very little pain. Anæsthesia, general or local, is quite superfluous, and so is all after-treatment, but a little cotton-wool may be laid upon the site to prevent friction by the clothes. A thin dry scab falls from each spot after about six days. After seven or eight days the procedure may be repeated, and so on for six, eight, or a dozen times, according to the extent of the original enlargement. It is most valuable in the purely hypertrophic variety, but in the cystic also is of great advantage if the cysts be punctured with a Pravaz's syringe. In obstinate cases, the above method is rendered somewhat more severe by applying vaseline directly after 'stigmatising.' The effect is to cause the premature separation of the small scabs, which is followed by a slight suppuration for a few days. The explanation of the good effects of Paquelin's cautery, so applied, is presumably this. The irritation brought to bear on the nerve-endings in the skin causes constriction, more or less persistent, of the arterial muscular coats, which induces defective nutrition of the hypertrophic gland-substance, and its gradual disappearance. The above method is also very good in pleuritic affections, and in laryngeal and tracheal catarrh.

3794. *Riegel on Diseases of the Stomach.*—Professor Riegel's article (*Archiv für Klin. Med.*, Band xxxvi., p. 100) is reviewed by Dr. Schütz in the *Prager Med. Wochensch.*, No. 1, and the following abstract of the review may be of interest. As the basis of every investigation into diseases of the stomach, it must be washed out to ascertain the duration of digestion, as recommended by Leube. A healthy stomach has perfectly finished the digestion of an ordinary meal in seven hours, and Riegel confirms this. But conversely, the fact that the stomach is empty after such period does not necessarily prove the absence of disease, as, both in gastric ulcer and in Leube's 'nervous dyspepsia,' digestion is not delayed. In most gastric diseases, however, there is delay, and the next question is—its cause. To this end, the gastric juice must be examined. Riegel rejects Leube's method of cold water injection, and endeavoured to procure the contents of the stomach as undiluted as possible; these he afterwards examined for acids and pepsine. The best reagent for free hydrochloric acid was found to be methyl-anilin-violet, and for the separation of lactic and butyric acids from the former, Uffelman's test of carbolate and chloride of iron (*Archiv für Klin. Med.*, Band xxvi., p. 431). The amount of pepsine was estimated from the time required for the complete digestion of a very small quantity of albumen. As a result, cases of gastric diseases are divided into three groups. 1. Cases characterised by the absence of free hydrochloric acid, and the presence of lactic and butyric acids; pepsine being almost or entirely absent. This condition was found mainly in cancer, and in dilatation from cancerous constriction of the pylorus. The hydrochloric acid is regarded as normally secreted, but it is destroyed by the cancer, according to Professor Riegel. 2. Cases presenting a sour fermenting liquid, containing much lactic and butyric acid, also free hydrochloric acid; the digestion test indicating a fairly normal amount of pepsine. To this category belong the cases of gastric disorder from fermentation, well described by Naunyn. Methodical washing out is of the greatest value in these cases. 3. Cases in which the digestion is considerably prolonged; hydrochloric acid is abundantly present, organic acids are absent or nearly so, and the digesting power of the gastric juice is normal. It is shown that a further addition of hydrochloric acid does not quicken, but rather hinders, digestion. An excess of organic acids, with excess of hydrochloric acid, hinders digestion, and acid fermentation is induced. Practically speaking, hydrochloric acid should only be given when there is a deficiency of acid in the gastric contents during digestion, as shown on examination.

E. J. EDWARDES, M.D.

3795. *De Renzi on Incontinence of the Pylorus.*—During the past year, Professor De Renzi has met with eleven patients suffering from this ailment, which he believes to be very common at Naples, owing to the abuse of farinaceous food there. The diagnosis may be established in the way shown by Frerichs. Tartaric acid and bicarbonate of soda are dissolved in separate glasses and are taken by the patient, one directly after the other, the acid first and then the alkali. When there is complete incontinence, distension of the anterior abdominal wall, especially in the umbilical region, is observed, and then a lateral distension corresponding to the colon. Another mode of verifying the diagnosis is by introducing a manometer into the stomach, but of this plan the author will speak at some future time. The quantity of tartaric acid and of bicarbonate of soda employed is from 5 to 10 grammes of each powder, according to the size and sex of the patient. These large doses have never given rise to any inconvenience, except occasionally a transient breathlessness. The author notes as a remarkable fact that he has sometimes observed incontinence of the pylorus during fasting, but has found the orifice closed during digestion. The treatment is the treatment of the originating cause.

3796. *Spannocchi on Addison's Disease.*— Dr. Spannocchi contributes an interesting article on Addison's disease (*Gazz. degli Ospitali*, Nos. 5 and 6, 1885). He traces the history of the disease, gives an outline of the symptoms, summarises the experiments, including some by himself, that have been made on animals, relates in abstract several cases reported by other observers, and puts forward a theory to harmonise the facts and bind them together. Here we need concern ourselves only very briefly with two or three of the points dealt with. The author concludes from his own experiments that the suprarenal capsules have no important function in adult life, and have no influence in forming pigment, and he holds with Harley that these bodies are merely the remains of fœtal structures. Inferences from experiments on animals, however, must not without some check be applied to human physiology; and the frequent connection of degenerated suprarenal capsules with Addison's disease has to be explained. The author's explanation is that the sympathetic nervous system is the essential seat of the disease. This would be in keeping with the frequency of tubercle of the capsules, as tubercular inflammation would most readily spread to adjacent structures. There need not of necessity be coarse changes in the nerves. The change may be functional. Sudden blanching of the hair from emotion shows the influence of functional states of the nerves. Dr. Spannocchi himself witnessed a case in which all the hair in a woman aged 20 turned white upon the death of her husband on the night of her marriage. This nervous theory of Addison's disease appears to the author to explain the more important phenomena. Whether owing to reflex action or to degeneration of the solar plexus or semilunar ganglia, there may be paralysis of the vasomotor nerves of the intestines. Stagnation of blood would thus be brought about, causing the various abdominal symptoms, such as vomiting and diarrhœa. The accumulation of blood in the abdomen, involving a relative deficiency elsewhere, would account for the general symptoms of anæmia. The coloration of the skin is the most difficult to explain. It may be due to decomposition of the hæmoglobin in the pigmented epithelium of the skin, owing to the peripheral anæmia. The altered activity of these cells, and the absence of vessels in them, might allow substances deposited therein to become converted into pigment under exposure to light and air. Further researches, however, are required to clear up the subject.

William R. Huggard, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3797. Schtchegloff.—On Carbolic Enemata in Dysentery. (*Russkaia Meditz.*, No. 31, 1884, p. 637, and No. 32, p. 657.)

3798. Kampf.—On Carbolic Enemata in Dysentery. (*Russkaia Meditz.*, No. 48, 1884, p. 1002.)

3799. Bogaëvsky.—On a Case of Malignant Lymphoma of the Neck Treated by Arsenic. (*Russkaia Meditz.*, No. 2, 1885, p. 37.)

3800. Tcheltzoff, M. M.—On the Action of Cascara Sagrada (Rhamnus Purshiana) on the Secretion of Digestive Juices. (*Ejened. Klin. Gazeta*, No. 35, 1884, p. 545.)

3801. Limberg, A. K.—On Cucain in Dental Practice. (*Vratch*, No. 2, 1885, p. 27.)

3802. Korczynski, Professor.—On Extractum Stigmatum Maidis in Diseases of the Bladder and Kidneys. (*Medycyna*, No. 49, 1884, and *Vratch*, No. 1, 1885, p. 12.)

3803. Lewin.—The Action of Folia Uvæ Ursi and Arbutin in the Organism. (*Pharm. Jour.*)

3804. Vigier.—Physiological Action of Borax. (*Jour. Pharm.*)

3805. Heckel and Schlagdenhausen.—The Kola Nut. (*Ann. de Chem. et de Physique.*)

3806. Pletzer.—The Effect of Cold and Warm Baths on the Temperature of the Body. (*Bied. Centr.*, 1883.)

3807. Piogey.—The Treatment of Urticaria by Pilocarpine. (*Jour. de Méd. de Paris*, Jan. 3.)

3808. Dujardin-Beaumetz.—The Use of Water charged with Oxygen. (*Répert. de Pharm.*)

3809. Naegeli.—Kairin in Yellow Fever. (*El Siglo Medico*, Feb. 1, 1885.)

3810. Dozzi, G.—Twelve Applications of Intestinal Injection of Blood, and Two of Intraperitoneal Transfusion. (*Riv. Veneta di Sci. Med.*, Sept. 1884.)

3811. Merces.—Osmic Acid in Sciatica. (*Lancet*, Jan., p. 58.)

3812. Morris.—Hydrochlorate of Cucain in Pruritus Ani. (*Brit. Med. Jour.*, Jan., p. 177.)

3813. Neale.—The Value of Cucaine in Excision of the Uvula. (*Brit. Med. Jour.*, Jan., p. 209.)

3814. Benham.—The Treatment of Acute Pneumonia, with Especial Reference to Blood-letting. (*Med. Times and Gazette*, Jan , p. 73.)

3815. Campbell.—Warm Douching of the Head and Neck in the Insomnia of Continued or Eruptive Fevers. (*Brit. Med. Jour.*, Jan., p. 176.)

3816. Murray.—Amenorrhœa treated by Permanganate of Potash. (*Lancet*, Jan., p. 189.)

3817. White.—Bog-bean in the Treatment of Functional Amenorrhœa. (*Lancet*, Jan., p. 235)

3818. Hardy.—On Caffein. (*Lancet*, Jan., [p. 188.)

3819. Sanctuary.—The Use of Certain Remedies in Functional Amenorrhœa. (*Lancet*, Jan. p. 59.)

3820. Fraenkel.—Cucain as a Local Anæsthetic. (*Deutsche Med. Wochensch.*, Dec. 11.)

3821. Schwarz.—Naphthalin in Diarrhœa. (*Centralbl. für Klin. Med.*, Dec. 13.)

3822. Erlenmeyer.—Bromides in Nervous Affections. (*Centralbl. für Klin. Med.*, Dec. 13.)

3823. Treatment of Cholera by Injection of Tannic Acid. (*Centralbl. für die Gesammte Therap.*, December.)

3824. Rosenfeld.—Iodated Phenol in Dysentery in Children. (*Centralbl. für die Gesam. Therap.*, January.)

3825. Cucain as an Antidote to Morphia. (*Wiener Med. Blätter*, Jan. 15.)

3826. COHEN.—The Use of Compressed and Rarefied Air as a Substitute for Change of Climate in the Treatment of Pulmonary Disease. (*New York Med. Jour.*, Oct. 18, 1884.)

3827 FUBINI. — Broncho-Pulmonary Inhalations of Defibrinated Blood. (*La Riforma Medica*; *Riv. Clin. dell' Univ. di Napoli*, No. 1, 1885.)

3828. SEATON.—On the Treatment of Dysentery by Ipecacuanha. (*Therapeutic Gazette*, August 1884.)

3829. SCHAEFER.—On Phenol-camphor.

ART. 3797. *Schtchegloff on Carbolic Enemata in Dysentery.*—In the *Russkaia Meditz.*, Nos. 31 and 32, 1884, Dr. Schtchegloff, of Jisdra, Kaluga Government, writes that he has tried carbolic enemata in twelve cases of acute dysentery, and obtained most striking results. Six of the patients (all peasants and soldiers) left the hospital after three days' treatment, three after four days, one after six days, one after nine days, and one after ten days. In two of the cases the carbolic treatment was resorted to after other means (calomel, starch and opium enemata, tartaric acid, &c.) had failed. In the remaining ten the patient, on his admission, had six drachms of castor-oil, as well as wine and tincture of valerian (according to the state of his pulse). On the next morning an enema, made of six or seven pints of a carbolic solution (1 to 500), at the temperature of 27° R. (92·75 F.), was administered. In all the cases, within a few hours after the first enema, there were observed a decrease of the temperature and a great diminution of abdominal pain and tenderness; then the stools rapidly lost their dysenteric character, and, after one or two pure diarrhœa stools, soft sausage-shaped and normally coloured excrements followed. The author never observed any awkward accessory effects from the treatment. Dr. Schtchegloff tried also the treatment of dysentery by the internal administration of carbolic acid, but its success was only very moderate. [The carbolic treatment of dysentery is not new (*vide* Dr. R. Neale's *Medical Digest*, sect. 904 : 5). In Eulenburg's *Real Encyclopædie des Ges. Heilk.*, vol. xi., p. 595, Professor Hermann Eichhorst draws attention to dangers from even diluted carbolic enemata in dysentery.—*Rep.*]

3798. *Kampf on Carbolic Enemata in Dysentery.*—The perusal of Dr. Schtchegloff's article induced Dr. Kampf, of Oster, Tchernigov Government, to try (*Russkaia Meditz.*, No. 48, 1884) the plan recommended by the former in eight cases of acute dysentery (three in hospital practice, five in private). Three hospital cases (peasants) were very severe. The treatment was commenced on the fifth, sixteenth, and twelfth days of the disease. The enemata (made of 1 part of the acid to 500 of water) were administered twice or three times daily, at the same time an emulsion of castor-oil and resorcin being given. The results were as brilliant as in Schtchegloff's cases. All three patients left the hospital after four days' treatment. Five cases in the author's private practice were all cured after two or three carbolic enemata. Feeling encouraged by his own and Schtchegloff's remarkable success, Dr. Kampf recommends carbolic acid as a specific remedy for dysentery.

3799. *Bogaëvsky on a Case of Malignant Lymphoma of the Neck Treated by Arsenic.*—In the *Russkaia Meditz.*, No. 2, 1885, p. 37, Dr. A. Bogaëvsky, of Krementchug, relates the case of a retired soldier, aged 30, with a rapidly growing cervical lymphoma of the size of a goose's egg, in which he followed Winiwarter's plan of the treatment by parenchymatous injections of Fowler's solution, with the simultaneous internal administration of the latter. Within eight weeks, about ten drachms of the arsenical solution were injected into the tumour, the latter being greatly softened and reduced to a half of its original size. To accelerate the matter the author cut into the growth, evacuated its semifluid contents, and extirpated the capsule. Four weeks later the wound healed, and the patient left the hospital.

3800. *Tcheltzoff on the Action of Cascara Sagrada.* Following a suggestion made by Professor S. P. Botkin, Dr. M. M. Tcheltzoff undertook a series of experiments on dogs in order to elucidate the action of fluid extract of cascara sagrada (rhamnus purshiana) on the animal system. The results, as described in a preliminary notice in the *Ejened. Klin. Gazeta*, No. 35, 1884, p. 545, may be summed thus. I. *Internal Administration.*—1. In doses from 4 to 10 cubic centimètres (with a double quantity of water), cascara sagrada excites the secretion of gastric juice and increases it during digestion. 2. It increases, also, the secretion of pancreatic juice. 3 It excites and increases the secretion of bile. 4. It has no action on the secretion of saliva. 5. In doses as above, cascara never led to any rapid and considerable evacuations. The administration of 25 to 30 cubic centimètres of the extract brought about motions, but they never were more than scanty. Hence the author concludes that, as a prompt laxative, cascara is useless. II. *Intravenous Administration.*—1. When introduced directly into the blood, cascara does not display any laxative power whatever. 2. The intravenous administration brings about extreme depression, and a prolonged failure in general strength of the animal experimented upon. 3. The arterial tension falls rapidly and considerably, the phenomenon being observed both in normal animals and in those with the vagi divided. 4. The phenomenon is probably dependent upon the obstruction of the cardiac vessels by small coagula, which arise on introducing cascara into the blood.

3801. *Limberg on Cucain in Dental Practice.*—In the *Vratch*, No. 2, 1885, p. 27, Dr. A. K. Limberg, of St. Petersburg, criticises the results obtained by Drs. Howe, Perry, Ives, and Payne (*vide Dental Cosmos*, 1884), in regard to the use of cucain in various dental operations, and comes to the same conclusions as Mr. Morton Smale in the *Brit. Med. Jour.*, Jan. 10, 1885, p. 69. Judging from his own experience, as well as from that of Drs. S. Linbeck and J. E. Klaproth, of St. Petersburg, Dr. Limberg thinks that carbolic and arsenious acids and ether relieve the sensitiveness of the dentine better than cucain, even when the latter is repeatedly applied in a 20 or 25 per cent. alcoholic solution. Cucain is entirely useless in cases of extraction of teeth and of removal of an inflamed pulp.

3802. *Korczynski on Extract of Stigmata of Maize in Diseases of the Kidneys and Bladder.*—Professor Korczynski, of Cracow (*Medycyna*, No. 49, 1884, and *Vratch*, No. 1, 1885), found extract of stigmata of maize very useful in cases of renal calculi and subacute catarrh of the bladder and renal pelves. The drug increased the daily quantity of urine, and relieved both catarrhal symptoms and renal colic. The author employed the following formula: ℞ Extracti stigm. maidis, gramm. 6, ; extracti et pulv. gentianæ āā q.s. ut fiant pilulæ 30. From six to nine pills a day. [For Dupont's article on maize in diseases of the heart, *see* the London Medical Record, August 1884, p. 350; *see* also Dr. R. Neale's *Medical Digest*, sect. 321 : 1.—*Rep.*]

V. Idelson, M.D.

3803. *Lewin on the Action of Folia Uvæ Ursi and Arbutin.*—According to L. Lewin (*Pharm. Jour.*), the therapeutic value of uva ursi leaves is due to the quinol they contain, as the tannin present simply exerts a very slight auxiliary action. Arbutin splits up inside the body, as it does outside, into sugar and quinol; but, as the decomposition is not complete, quinol and some unchanged arbutin are found in the urine, which latter shows its presence by undergoing a change of colour, becoming olive-green or brownish on exposure to the air, turning gradually alkaline at the same time. These changes are the result of oxidation. Quinol acts as an antizymotic and antiseptic even in 1 per cent. solutions, urine containing it not readily undergoing decomposition. The dark oxidation-products of quinol have an irritative action, which is beneficial in catarrhal affections of the mucous membrane of the bladder by inducing a reparative process. The author suggests the use of larger doses than those usually given ; *e.g.* 30 to 80 grammes of the leaves in 180 grammes of menstruum, the tannin being removed by shaking with charcoal and then filtering. But the use of arbutin itself is preferable ; *e.g.* 1 gramme of arbutin mixed with half a gramme of sugar, and dissolved in water. The arbutin may even be given hypodermically.

3804. *Vigier on the Physiological Action of Borax.*—F. Vigier (*Jour. Pharm.*) concludes from his experiments that, even in large doses, borax exerts no injurious physiological action. A dose of 3½ grammes caused a copious flow of saliva, which was abnormally alkaline, and the appetite was increased. After five grammes of borax in solution had been injected in small doses into the veins, borax was found in the saliva and urine, appearing to be slowly eliminated in the latter.

3805. *Heckel and Schlagdenhausen on the Kola Nut.*—According to E. Heckel and F. Schlagdenhausen (*Ann. de Chem. et Phys.*, Tome v.) the extract of this nut is used by the inhabitants of Central Africa in the same way as we use tea or coffee. Daniell and Attfield have proved the presence in it of an alkaloid resembling theine or caffeine. From the Kola Femelle, or true Kola (*Sterculea acuminata*) an alkaloid exactly resembling caffeine was obtained. This is the analysis :—

		Per Cent.
Chloroform Extract	Caffeine	2·348
	Theobromine	0·023
	Tannin	0·027
	Fats	0·585
Alcoholic Extract	Tannin	1·591
	Kola red	1·290
	Glucose	2·875
	Salts	0·070
Starch		33·754
Gum		3·040
Colouring matter		2·561
Proteids		6·761
Ash		3·325
Water		11·919
Cellulose		29·830

It will, therefore, be seen that kola contains a considerably larger proportion of caffeine and theobromine and of the carbohydrates than is the case with tea or coffee. In the false Kola, or Kola Bitter (*kola garcinia*), belonging to the family of the Guttiferæ, no caffeine was obtained ; only two resins—one of which was dextro-rotatory, and precipitable by basic acetate of lead ; and the other gave a violet colour with ferric salts. Its physiological action is due to these two resins.

3806. *Pletzer on the Effect of Cold and Warm Baths on the Temperature of the Body.*—According to A. Pletzer (*Bied. Centralbl.*, 1883), cold baths, it is known, lower the animal temperature ; but, in consequence of this, the regulating influence of the skin is soon exerted, and an increase in temperature is brought about. But if an animal that has been cooled by immersion in cold water be placed at once in a warm bath, a further rapid lowering of temperature takes place.

Healthy Rabbit.
Temperature 38°·6 to 38°·7 Cent.

Temperature of Bath. Cent.	Temperature of Animal. Cent.
30°	38°·5 to 38°·2
40°	38°·1 to 38°·0
9°	38°·05
40°	37°·7 to 37°·5
9°	37°·5
40°	37°·5 to 36°·8

Feverish Rabbit.
Temperature 40°·2 to 40°·3 Cent.

Temperature of Bath. Cent.	Temperature of Animal. Cent.
30°	40°
40°	39°·8 to 39°·7
29°	39°·7 to 39°·1
12° (air)	39°
40°	38°·6 to 38°·5
9°	38°
40°	37°·8 to 37°·2
9°	37°·5
40°	36°·6

In one experiment the temperature of the body was lowered 5° C. by alternate cold and warm baths. Simultaneously with the lowering of the temperature there is a lessened consumption of oxygen, and consequently a diminished oxidation in the body.

T. Cranstoun Charles, M.D.

3807. *Piogey on the Treatment of Urticaria by Pilocarpine.*—In the case of a woman, aged 53, suffering from widely spread urticaria, which had invaded the pharynx and caused intolerable itching, M. Piogey (*Jour. de Méd. de Paris*, Jan. 3, 1884) at first tried emetics, quinia, belladonna, and hypodermic injections of morphia without decided benefit. He then injected two-thirds of a grain of pilocarpine, after which considerable improvement took place. Three injections effected a complete cure, and the eruption did not reappear.

3808. *Dujardin-Beaumetz on the Use of Water charged with Oxygen.*—The author has recently shown at the Société de Thérapeutique de Paris (*Répert. de Pharm.*) some siphons of water charged with oxygen instead of carbonic acid. He has tried such water in cases of loss of appetite and polydipsia with very marked benefit ; in diabetes, no good result has been obtained. The dose is from one to four siphons per day, either pure or with wine. Lemonade and wine are also manufactured, charged with oxygen.

J. S. Keser, M.D.

3809. *Naegeli on Kairin in Yellow Fever.*—Dr. Naegeli, of Rio de Janeiro, has treated seven cases of yellow fever with kairin, obtaining very favourable result in five. All the cases were very severe. One gramme of kairin was given every hour as long as the temperature remained high ; the medicine was afterwards continued in half doses to prevent any further rise of temperature. The occurrence of black vomit is not a contra-indication for the administration of the kairin, should the temperature be high. With the exception of cold drinks and a small quantity of alcohol, no nourishment was given. The feeling of well-being, absence of delirium, and sleep, following the administration of the drug, showed its beneficial action on the nervous system. Convalescence was short, and the appetite returned even before the fever had finally disappeared.

3810. *Dozzi on Intestinal Injection of Blood and on Intraperitoneal Transfusion.*—Dozzi gives in full the history of twelve more cases in which intestinal injections of defibrinated ox-blood were used. The diet, as a rule, was restricted to polenta, and no medicine was given.

No.	Age.	Disease.	Hæmoglobin.		Days in Hospital.	No. of Applications.	Result.
			Before.	After.			
1.	16	Malarial Cachexia	35·5	62·4	50	27	good
2.	35	Pellagra	40	58·5	30	15	id.
3.	45	id.	39	62	40	16	id.
4.	60	id.	50	68	45	12	id.
5.	70	id.	60	85	60	20	id.
6.	50	id.	50	57	90	20	none
7.	20	id.	45	62	45	16	good
8.	30	id.	35	70	45	16	id.
9.	40	Leucocythæmia	38	72	50	20	id.
10.	65	Pellagra	53	70	60	20	id.
11.	15	id.	35	68	70	30	id.
12.	21	id.	40	70	47	20	id.

In the 12 cases there is only 1 negative result. The mean increase of hæmoglobin was from 42·6 to 67·4; the average number of days in hospital was 52·6; adding the 4 cases published previously there are 15 successful cases to one unsuccessful. This result shows that in injections of defibrinated blood we have a very valuable remedy in many cases of grave cachexia, in which ordinary remedies have been tried without avail. The following is the history of the two subperitoneal transfusions. G. B., 15, suffering from phthisis, had high evening fever, great marasmus, and ascites. After 25 days in the hospital, paracentesis with subsequent transfusion was determined on. With a fine trocar 8 litres of sero-albuminous liquid were drawn off, and 150 grammes of defibrinated blood, recently taken from a healthy pregnant woman, were injected. On the next day the pulse, which had been 115 in the minute, had descended to 90, and the hæmoglobin from 40 had risen to 55, and on the third day to 60; one month after it had again fallen to 50, showing, however, a gain of 10 per cent. The abdominal fluid having again collected, paracentesis was again performed, and 10 litres of perfectly clear fluid drawn off; 250 grammes of blood were again injected. On the following day the hæmoglobin had ascended to 65, and on the third day to 70. After a fortnight the boy was able to run about and was much improved. Intraperitoneal transfusion in ascites is very safe, the peritoneum being habituated to the presence of a foreign body. The blood is completely absorbed, and this rapidly, as shown by cytometric examination. Even in a hopeless case of advanced phthisis great benefit may be obtained, as shown by this case. G. D'Arcy Adams, M.D.

3811. *Merces on Osmic Acid in Sciatica.*—In the *Lancet*, Jan. 1885, p. 58, Mr. James Mercer writes that he has found hypodermic injections of osmic acid very beneficial in some cases of sciatica. The author treated by this means eighteen cases, which had resisted all other known methods of treatment at the Bath Mineral Water Hospital. The patient's ages varied from eighteen to sixty-five. In twelve the relief was absolute for a period of three weeks, after which time they left the hospital and the author lost sight of them. In six cases, only temporary relief was obtained. A one per cent. solution was used, three to five minims of which were injected deeply over the sciatic nerve, at a point midway between the tuber ischii and trochanter major. The injection produced no constitutional effects, but the patients complained of a numb feeling at the seat of the puncture, which soon passed off.

3812. *Morris on Hydrochlorate of Cucain in Pruritus Ani.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 177, Mr. Malcolm Morris records the notes of a case of a middle-aged gentleman, who had suffered for years from intense irritation and pricking in the anus, which prevented him from sleeping. The author ordered a twenty per cent. solution of hydrochlorate of cucain with five per cent. of glycerine, to be painted over the mucous membrane of the anus three times, at intervals of ten minutes, every night and morning. The treatment produced wonderful relief, and the patient improved in health, but after a week's trial circumstances occurred which caused the remedy to be neglected for two days, when the irritation came back as severely as ever. The treatment was then resumed; and relief was once more obtained and continued for a fortnight together with a continuance of the process. The author does not yet know the result of discontinuing the drug, but considers that the benefit already derived is worthy of record.

3813. *Neale on the Value of Cucain in Excision of the Uvula.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 209, Dr. Neale writes that he found a two per cent. solution of cucain most useful in a case of excision of the uvula, in a sensitive girl. Two minutes after the use of the solution, the patient was free from pain.

3814. *Benham on the Treatment of Pneumonia, with Especial Reference to Venesection.*—Dr. Benham, in the *Med. Times and Gaz.*, January 1885, p. 73, writes that he feels sure a great many lives might be saved, when attacked badly by pneumonia between the ages of 18 and 30 years, if they were treated by lowering remedies alone. The plan of treatment recommended is to withdraw 10 or 12 ounces of blood from the arm, and if the effect be good, but not sufficient, to repeat the operation in twelve or twenty-four hours. At the same time drugs must not be neglected, and foremost amongst them stands antimony, in doses of 20 to 30 minims of the wine, joined with other diaphoretics, at first every hour, and less frequently afterwards as the fever abates. The time to bleed is when the fever is fully developed, but the old rule holds good that 'it is never too late to bleed in acute pneumonia.' The author then goes on to discuss how far these principles hold good or require modification in complicated cases, and shows how in most cases, where the fever is sthenic and severe, great advantage results from cautious depletion. [In the *Medical Digest*, sect. 668: 5, will be seen an array of witnesses to the good of venesection.—*Rep.*]

3815. *Campbell on Warm Douching of the Head and Neck in the Insomnia of Continued or Eruptive Fevers.*—In the *Brit. Med. Jour.*, January 1885, p. 176, Mr. A. J. Campbell suggests a most pleasant and soothing method of employing the douche, in cases of insomnia. The patient's shoulders having been wrapped in a sheet or blanket, and his ears plugged with cotton-wool, his head is supported over the edge of the bed (a suitable vessel being placed underneath to receive the water), whilst a gentle stream of warm water from the rose-spout of an ordinary watering-pot is directed over the head and neck. The watering-pot should be held at least eighteen inches above the level of the patient's head, and the douching may be kept up for three or four minutes; the head should then be lightly dried with a towel, and the patient lifted into his ordinary position in bed. As a rule, sleep is produced within a short period.

3816. *Murray on Amenorrhœa Treated by Permanganate of Potash.*—Dr. Murray, in the *Lancet*, January 1885, p. 189, records the following case. A young lady, aged 16, consulted the author in November 1884. She stated that in June 1884 she menstruated for the first time, and again in September. When seen in November she was both nervous and anæmic; sulphate of iron and aloes and other tonic treatment were ordered, which improved the general health considerably, but there was no sign of a return of the catamenia. The author then decided to try Ringer's treatment. He procured some pearl-coated pills from Messrs. Richardson & Co., Leicester, containing one grain of permanganate of potash in each pill, made up with 'kaolin to prevent oxidation.' One of these pills was taken three times a day with meals. After nine pills had been used the catamenia returned.

3817. *White on Bog-bean in the Treatment of Functional Amenorrhœa.*—Dr. Ernest White, in the *Lancet*, January 1885, p. 235, writes that he endorses the words of Dr. Pollock respecting the treatment of 'functional amenorrhœa' by bog-bean (menyanthes trifoliata). Dr. White's father has used the drug for thirty-five years with great success in these cases, and his son finds from experience also that the drug is of much value in cases that will not yield to the usual remedies.

3818. *Hardy on Caffein.*—In the *Lancet*, January 1885, p. 188, Dr. Hardy draws attention to the value of caffein as a heart-tonic. The author has used the drug in doses of 2 grains three or four times a day, in three cases in which cardiac debility was a very marked symptom. Two of the cases were the result of recent attacks of rheumatic fever; the third was the result of a long residence in India, with continual ill-health while there. The only caution required in using the drug in the dose above mentioned is, to be careful that it is not given towards night, as it is likely to keep the patient awake for some hours.

3819. *Sanctuary on the Action of Certain Remedies in Functional Amenorrhœa.*—In the *Lancet*, January 1885, p. 59, Dr. Sanctuary gives an abstract of sixteen cases of amenorrhœa treated by permanganate of potash and apiol. Apiol is prescribed in the form of capsules or emulsion, but is more griping and more expensive than permanganate of potash. The latter drug produces a profuse painless flow, after from four to twelve grains have been taken. The author restricts the term 'functional amenorrhœa' to those cases in which the menstrual flow is missed for one, two, or more months, for no apparent cause. Apiol was employed in Brittany about the year 1849 as a febrifuge; but, when its emmenagogue properties were discovered, it gradually became known as a good remedy for amenorrhœa. The capsules can be imported in the form originally ordered by Dr. Joret and Homolle; each contains from three to five minims of the drug. The best method of administering the permanganate of potash is to give a pill containing one grain (made with kaolin to prevent oxidation) three times a day.

RICHARD NEALE, M.D.

3820. *Fraenkel on Cucain as a Local Anæsthetic.*—The *Deutsche Med. Wochensch.*, of Dec. 11, reviews an article by Dr. Ernst Fraenkel on the employment of cucain as a local anæsthetic for the mucous membrane of the vulva and vagina. As an anæsthetic he has employed it previously to cauterising the vaginal mucous membrane, either with nitrate of silver, or with concentrated solution of corrosive sublimate; in the removal of small growths and the cauterisation of their bases: or even, in very sensitive individuals, in the scarification or cauterisation of the cervix uteri. To diminish reflex action, he has used it in temporary vaginismus, and in fissures of the anus, where it may be applied before each action of the bowels. He uses a 20 per cent. solution, and the mucous membrane is always carefully cleansed and dried before the application, which is repeated three or four times, according to the necessities of the case, at intervals of from one to three minutes. The effect is very striking, although it is not always the same in strength or in duration.

3821. *Schwarz on Naphthalin in Diarrhœa.*—Dr. Schwarz, assistant to the medical clinic at Zurich, writes to the *Centralbl. für Klin. Med.*, of Dec. 13, to give his experience of naphthalin in diarrhœa, as recommended by Rossbach. He found that the drug had very seldom any effect in stopping the diarrhœa, or in destroying the micro-organisms present in the stools, but that it was of the greatest service in overcoming the fæcal odour, which in some cases, as in one of carcinoma of the stomach, would otherwise have necessitated the isolation of the patient. In one case of renal phthisis, the very foul odour of the urine was subdued by placing a few grammes of naphthalin in the chamber vessel before it was used, and sprinkling a small quantity over the vulva. The drug was given to the amount of from 1·5 to 3·0 grammes (22½ to 45 grains) a day; but in some cases its internal use caused so much pain and difficulty in micturition that it had to be discontinued.

3822. *Erlenmeyer on Bromides in Nervous Affections.*—The *Centralbl. fur Klin. Med.*, of Dec. 13, quotes a paper of Dr. Erlenmeyer on the employment of a mixture of salts of bromine in various nervous affections, especially epilepsy. He finds that all the ordinary bromides have the same effect in epilepsy, no single one succeeding in permanently preventing the attacks after the discontinuance of the treatment. The evil effects of bromide of potassium on the heart and blood-vessels are not produced by the other salts, but the most remarkable observation made by Dr. Erlenmeyer is that the acne caused by one salt disappears on the administration of a similar dose of another. This has led him to prescribe a combination of the bromides of potassium (2 parts), sodium (2 parts), and ammonium (1 part), with which he has secured a prolonged cessation of the fits, and immunity against bromic acne. The treatment should be persevered in until the appearance of toxic symptoms, drowsiness, uncertain gait and speech, &c., and it may be employed in other nervous affections as well as in epilepsy.

3823. *Treatment of Cholera by Injection of Tannic Acid.*—The *Centralbl. für die Gesam. Ther.* for

December contains an article on the treatment of cholera by means of warm intestinal injections of a solution of tannic acid, as suggested by Professor Cantani. The action of tannic acid is well known to be that of protecting animal tissues from putrefaction, and consequently of leaving the cholera-bacillus no suitable ground for its multiplication, even if not destroying it at once. The proportion of tannic acid is five to ten parts in 2,000 of boiling water or of infusion of chamomile, and it should be thrown up as high into the intestine as possible; although, in the absence of a long tube, an ordinary rectal enema-syringe will answer the purpose, when the case is taken at the commencement.

3824. *Rosenfeld on Iodated Phenol in the Dysentery of Children.*—Dr. Rosenfeld recommends what he calls iodated phenol (*Phenolum iodatum*) for dysentery in children (*Centralbl. für die Gesam. Therap.*, January). The drug consists of a solution of about 4 grains of pure iodine in 1¼ ounce of glycerine, to which about 4 grains of carbolic acid are added. One to two teaspoonfuls of this mixture are administered three or four times a day in a glassful of water as an enema. A sensation of warmth in the abdomen is followed by a substitution of green stools for the former bloody ones, and in the course of a day or two the only remaining trace of the malady is a slightly mucous diarrhœa. In a severe epidemic of dysentery, in which 80 per cent. of those attacked were under 10 years of age, and 49 per cent. between 1 and 3 years, only 6 died out of 142 treated in this way.

3825. *Cucain as an Antidote to Morphia.*—The *Wien. Med. Blätter* for Jan. 15 reports on cucain as an antidote for morphia, especially in cases of habitual abuse of the drug. The injection of one-seventh of a grain to a grain and a half of cucain induces a condition very similar to that caused by a sudden stoppage of the morphia, but there is besides a peculiar sensation, as if the cucain were seeking out the morphia in the body, and eliminating it by degrees. Griping then follows, as if from a drastic purgative, and copious thin stools ensue. The face becomes yellow, as in the abstinence cure, this passing off gradually as the cucain gets the better of the morphia in the organism. Cucain may be used as a measure for the amount of morphia which is present in the body of the patient, as the symptoms become more intense, the more cucain is given, until the morphia is entirely eliminated. It is suggested that a more pleasant mode of administration would be to give the two drugs together, and gradually to increase the cucain while diminishing the morphia, in order to avoid the unpleasant symptoms of the morphia hunger. ALICE KER, M.D.

3826. *Cohen on the Use of Compressed and Rarefied Air in the Treatment of Pulmonary Diseases.*—Dr. Solis Cohen (*New York Med. Jour.*, Oct. 18, 1884) describes an improved apparatus for the administration of compressed and rarefied air, which can be supplied for 20 dollars. It is constructed on the principle of the gasometer. He commences at $\frac{1}{80}$ additional pressure, and never exeeeds $\frac{1}{30}$ more than the normal pressure. Inhalations of compressed air are, he considers, indicated in early phthisis, in chronic bronchitis, and in partial collapse of the lung following pneumonia. They are contra-indicated where there is a disposition to hæmoptysis, hæmatemesis, epistaxis, hæmorrhoids, or other blood-loss. Inspirations of rarefied air may be used as a gymnastic exercise of the muscles of respiration, but are unsuitable for weak patients, or where there is a tendency to hæmorrhage. Expirations into rarefied air are indicated in asthma and pulmonary emphysema. The author admits that, in the vast majority of cases in which change of climate is advisable, the administration of compressed or rarefied air is but an imperfect substitute; still, in many cases fully as much good can be secured by the latter treatment, and in many much more.

E. CRESSWELL BABER, M.B.

3827. *Fubini on the Inhalation of Defibrinated Blood.*—Professor Fubini, regarding the tolerance of the broncho-pulmonary apparatus towards foreign liquids that do not irritate the laryngeal mucous membrane and the rapidity of absorption by this channel, tried the effects of inhalations of defibrinated blood. Twenty parts of ox-blood were mixed with eighty parts of solution of chloride of sodium. The inhalation was made from an ordinary pulveriser. The inhalation was well borne, and remarkable improvement was obtained in cases of oligæmia.

WILLIAM R. HUGGARD, M.D.

3828. *Seaton on the Treatment of Dysentery by Ipecacuanha.*—Although the good effects of the powder of ipecacuanha root, in large doses, in dysentery, are a recognised fact, yet this mode of treatment is not so diffused as it deserves, for there is an impression among practitioners that it only succeeds in the dysentery of hot climates, and also because they fear to provoke vomit, which would increase the sources of waste already existing. Dr. Joscelyn Seaton (*Therapeutic Gazette*, August 1884), who, in his capacity of attending physician to the emigrants, averages twenty cases of dysentery to treat a day, considers ipecacuanha the best medicament against dysentery, and administers it as follows:—1. Abstinence from *liquids for two hours*. 2. Introduction into the rectum of an opium suppository. 3. Application, twenty minutes after, of a poultice of linseed-meal and mustard over the epigastrium. 4. Ten minutes after, the administration of 40 grains of the powder of ipecacuanha root, in a biscuit or in wafer, which is followed by a table-spoonful of milk or rice-water, to aid its deglutition. 5. The patient is recommended to keep the recumbent position for two hours at least, abstaining from any drink. Administered in this manner, this medicament has been in the author's hands, in hundreds of cases, as efficient as quinine in malarial fevers.

3829. *Schaefer on Phenol-Camphor.*—Dr. Theodore Schaefer, of Beecher, Illinois, noticed (in December 1882) that, when common or Japan camphor and crystallised carbolic acid were mixed together and subjected to heat, a colourless liquid was the result. The only reference he finds so far with regard to this reaction occurs in Dr. E. R. Squibb's *Ephemeris of Materia Medica*, &c., vol. ii., No. 5, p. 673, where a brief allusion appears under the appellation of compound alum powder. Dr. Squibb, however, in a letter to the writer, states that he has 'several times before heard of this reaction between phenol and camphor.' Phenol-camphor is best obtained by heating crystallised carbolic acid until it melts, and then gradually adding camphor; a clear liquid is obtained, which is characteristic on account of its permanency. In preparing this substance, the writer uses equal parts of camphor and of carbolic acid. It remains liquid for an indefinite time, and does not solidify on being subjected to the low temperature of a frigorific mixture of snow and sodium chloride. Phenol-camphor ($C_8H_{11}O$ [?]) is a colourless, refractive liquid, possessing the fragrant odour of camphor, entirely extinguishing the one of carbolic acid, and has a sweetish camphoric, but biting taste, not as caustic as that of carbolic acid, somewhat benumbing the tongue. It is soluble in alcohol, ether, chloroform, and ethereal oils, but is insoluble in water, being heavier than the latter. When ignited, it burns with a smoky flame. Dr. Schaefer has used phenol-camphor as a local anæsthetic in odontalgia, introducing it on cotton into the cavity of a carious tooth with good success, and can speak of it favourably as a local anæsthetic in ingrowing of the toe-nails. This substance can be likewise used as an antiseptic. It mixes well with paraffin, cosmoline, and many oils. In impregnating cotton gauze (antiseptic gauze), phenol-camphor may be used as a substitute for carbolic acid. Phenol-camphor is less irritating, less caustic than carbolic acid, and has the advantage of possessing a pleasant odour.

SYPHILOGRAPHY.

RECENT PAPERS.

3830. HERMET.—On Deafness in Inherited Syphilis. (*Annales de Derm. et de Syph.*, No. 5, 1884.)

3831. HORAND AND CORNEVIN.—Attempts to Transmit Syphilis to the Pig. (*Ibid.*, No. 6.)

3832. HAMONIC.—Vestibulo-urethral Fistula following Gonorrhœal Preurethral Folliculitis. (*Ibid.*, No. 6.)

3833. LAVERGNE ET PERRIN.—A Contribution to the Study of Extragenital Chancres. (*Ibid.*, Nos. 6 and 7.)

3834. KEDOTOFF.—The Communication of Syphilis by Circumcision according to the Jewish rite. (*Ibid.*, Nos. 9 and 10.)

3835. HILLER, A.—On Syphilitic Disease of the Lungs and Syphilitic Phthisis. (*Charité-Annalen*, Jahrg. ix., 1884, p. 184-282.)

3836. ZUCKER, J.—On Syphilis of the External Ear. (*Archiv für Ohrenheilkunde*, Band xxi., Heft 2 and 3, 1884.)

3837. NEUMANN, I.—On the Complications of Urethritis. (*Allgem. Wien. Med. Zeitung*, No. 21, 1884.)

3838. KNIGHT.—Two Cases of Chancre of the Tonsil. (*New York Med. Jour.*, June 14, 1884.)

3839. BAUMGARTEN.—A Case of Congenital Miliary Syphilitic Disease of the Spleen. (Virchow's *Archiv*, July 1884, p. 36.)

3840. BAUMGARTEN.—A Case of Congenital Syphilis of the Intestine. (*Ibid.*, p. 39.)

3841. SEGUIN.—Analysis of Seventy-five Consecutive Cases of Posterior Spinal Sclerosis with special reference to a Syphilitic Origin. (*Archives of Med.*, August 1884).

3842. SEGUIN.—The American Method of giving Potassium Iodide in very Large Doses for the Later Lesions of Syphilis; more especially Syphilis of the Nervous System. (*Reprint from the Archives of Medicine*, Oct. 1884.)

3843. COOPER, ALFRED.—Syphilis: its Prevalence, Nature, and Treatment. (*Brit. Med. Jour.*, Oct. 18, 1884.)

3844. BRICON.—On the Syphilococcus. (*Progrès Médical*, Nos. 37, 38, 41, 1884.)

3845. STERNBERG.—Further Experiments with the Micrococcus of Gonorrhœal Pus—'Gonococcus' of Neisser. (*Phil. Med. News*, Oct. 18, 1884.)

3846. PREIS, N. P.—Syphilitic Chancre of the Uterine Cervix. (*Russkaia Meditzina*, 1884, No. 34, p. 694; No. 35, p. 719; and No. 36, p. 734.)

3847. ZABOLOTSKY, A.—A Case of Syphilitic Reinfection. (*Meditz. Obozrenie*, No. 21, 1884, pp. 777-79.)

3848. NEVSKY, A.—A Case of Syphilitic Chancre of the Tongue. (*Meditz. Obozrenie*, No. 21, 1884, pp. 779-81.)

3849. SHADEK, K.—On Primary Syphilitic Induration of the Fauces. (*Meditz. Obozrenie*, No. 21, 1884, pp. 793-97.)

ART. 3830. *Horand and Cornevin on attempts to communicate Syphilis to Pigs.*—Four series of experiments, made by MM. Horand and Cornevin in 1882 and 1883 are reported in the *Annales de Derm. et de Syph.*, No. 6, 1884. *First Series.* Three pigs, three weeks old, were inoculated from a woman with mucous patches, enlarged glands, and other signs of active syphilis. The first pig was inoculated on both ears with the secretion taken from mucous patches of the tonsils. In the second pig, a piece of condyloma was inserted beneath the skin of the thigh, and the wound carefully sewn up. The third pig was inoculated by the subcutaneous injection, in four places, of a fluid prepared with distilled water and fragments of condylomata. In the first pig, the punctures became red on the following day, but this redness disappeared a few days later. In the second pig, a hard swelling of the size of a nut appeared next day at the site of inoculation, and did not disappear for about three weeks. A month after inoculation some red patches, looking like intertrigo, appeared, but a week later they had vanished. In the third pig, induration appeared at the site of each inoculation, and lasted about a fortnight. A month after the experiments, all the pigs were in perfect health, with no signs of lesion at the site of inoculation or elsewhere. They were also kept under observation for some time longer, but no signs of syphilis appeared. *Second Series.* These experiments consisted in inoculating three pigs, each six weeks old, one with the pus of simple (scrofulous) vaginitis; the second with a piece of the lobule of its own ear; the third with fragments of mucous patches taken from a woman with other early signs of active syphilis, who had not previously undergone any specific treatment. The fragments were inserted beneath the skin in three separate places. The wounds were closed with sutures in all three cases. On a certain date after the experiments [exact time after inoculation not mentioned] there were small nodosities, apparently exactly the same in every respect, at the site of every inoculation-wound in all three pigs. A week later all the sutures had come out, and all the nodosities had disappeared, and in another four days all the wounds had healed. The three pigs were kept under close observation at the Lyons Veterinary College till they were seven months old. The one which had been inoculated with syphilitic material never showed any signs of syphilis; and all three remained in perfect health. *The Third series* consisted of two experiments undertaken to test the effects of introducing syphilitic material into the pregnant sow. Two sows, both of which had completed one-third of the usual period of gestation (thirty-eight days), were inoculated by the introduction of a fragment of syphilitic condyloma beneath the skin of the thigh. The wounds were closed with metallic sutures. Nothing particular was observed at the site of inoculation or elsewhere. Both pigs went the full term of gestation (114 days), one having six and the other eight young ones. Neither mothers nor offspring showed any signs of syphilis. One mother was kept under observation for a year, and her young ones for seven months. The other sow was observed for sixteen months. Three of her young ones died of hunger during the first week after birth. One was examined after death, but did not present any signs of syphilis. A *Fourth Series* of experiments consisted in the subcutaneous injection of two young pigs with a culture-fluid consisting of urine, to which was added blood drawn from the middle of a syphilitic condyloma. In both cases nodules formed on the site of injection, and in one suppuration occurred. No signs of syphilis followed. Another pig was injected subcutaneously with pure urine, without any change occurring at the site of puncture. The conclusions drawn by the authors from these experiments are, that the pig is not susceptible to syphilis, and is, therefore, useless as a medium for experimenting with the virus of this disease. Further, no animal capable of being successfully inoculated with syphilis has yet been found.

3833. *Lavergne and Perrin on Extragenital Chancres.*—This paper (*Annales de Derm. et de Syph.*, Nos. 6 and 7, 1884) contains an account of all the cases (twenty-seven in number) under the care of M. Fournier during one year at the Hôpital St. Louis, in which the initial lesion of syphilis was seated elsewhere than on the genital organs. Of the twenty-seven cases, the seat of the initial lesion was one or other of the lips in ten; the eye and eyelids in five; the cheek in two; and the anus in two cases; while the nose, the ear, the neck, the arm, the finger, the breast, the leg, and the thigh were affected in one case each. In five instances the disease was conveyed through biting by syphilitic persons; twice, probably, through kissing. Two of the patients were children three years old, and both appeared to have been infected by one or other parent. In one case a woman was infected by her husband sucking her breast; and in another a man was infected on the thigh by his wife, who was manifestly syphilitic. In sixteen of the twenty-seven cases, the mode of contagion was not ascertained. In all, the diagnosis was confirmed by the appearance of secondary symptoms in due course. Ten of the cases are given in detail. The paper concludes with some remarks on the initial lesion of syphilis as it affects the eye and eyelid; the two most important diagnostic signs being the accompanying glandular enlargement, and the slow course of the affection.

3834. *Kedotoff on the Communication of Syphilis by the Jewish Rite of Circumcision.*—Dr. Kedotoff, of Cronstadt, reports (*Annales de Derm. et de Syph.*, Nos. 9 and 10, 1884) three cases in which syphilis was believed to have been communicated to the child by suction of the circumcision-wound, and afterwards from the child to its mother by suckling. —*Case* 1.—A woman, aged 27, with her child, aged 7 months, came under observation in Nov. 1883. The mother had an indurated sore on the right nipple, general roseola, and enlargement of the cervical, epitrochlear, and axillary glands. The genital organs, the anus, the lips, and mouth were free from disease. The sore on the nipple had appeared a month, and the spots on the skin five days previously. The child had a papular syphilide on the trunk and limbs, and mucous patches of the lips. The scar of the circumcision-wound was slightly indurated, and mucous patches were present on the inner surface of the prepuce and around the anus. The inguinal, cervical, and cubital glands were enlarged. Circumcision had been performed in the manner usual among the Jews when the child was eight days old, and at that time perfectly healthy. The wound did not heal for more than a month.—*Case* 2.—On Nov. 24, 1883, a Jewess came under treatment complaining of a sore throat. On examination mucous patches were found on the tonsils, uvula, and lips. On the right nipple was a slightly indurated cicatrix. The cervical and epitrochlear glands were enlarged and hard. The genital organs were healthy, and the inguinal glands were not enlarged. The sore on the nipple had appeared two months, and the sore throat one month, previously. The next day the child, aged nine months, was examined. It was nearly covered with a papular syphilide. The scar of the circumcision-wound was a little infiltrated, and there were mucous patches around it; the inguinal glands were enlarged. The child had been suckled by its mother, and had been circumcised by the same operators as in the first case. —*Case* 3.—On Dec. 3, 1883, a Jewess (herself apparently healthy) brought her child, aged seven months, for treatment. It had a mucous patch on the upper lip, and another on the scrotum. The scar of the circumcision-wound appeared normal. A week later the mother had an erosion on the left nipple. Three weeks later, the sore had become indurated. This child also had been circumcised by the same persons as the other two. The fathers of the first two children were examined by Dr. Kedotoff and found to be free from any signs of syphilis. In the third case the father was said to be in perfect health. As further evidence in favour of syphilis having been conveyed to the children by circumcision, the author calls attention to the fact that in two of the children traces of the primary sore were found. The operator, and his assistant who sucked the wounds, were the same in all three cases, and both were examined by Dr. Kedotoff. The operator was found to be healthy. The assistant, a man 50 years old, had no spots or scars on his body, nor any trace of syphilis about the genital organs or anus; but the inguinal, epitrochlear, and cervical glands were slightly enlarged. On the inside of the lower lip was a cicatrix, as well as an opaline patch covered with thickened epithelium. On the mucous surface of the upper lip was a fissure, and on the gum opposite to it a small greyish spot, which the author considered to be a mucous patch. The tonsils were congested and the voice was hoarse. One month later, the man was examined by two colleagues of Dr. Kedotoff. These gentlemen found the same signs as before, but were doubtful (as the author also would appear to have been) as to their true nature. Against the theory of inherited syphilis in the children is, of course, the fact that they infected their own mothers.

3836. *Zucker on Syphilis of the External Ear.*—Dr. Zucker, of Berlin, relates (*Zeitschrift für Ohrenheilkunde*, and *Archiv für Ohrenheilkunde*, Band xxi., Nos. 2 and 3, 1884) besides two cases of mucous tubercles of the external ear, another of a man in whom the initial lesion of syphilis was situated on the anterior wall of the cartilaginous portion of the external meatus. The tragus was of a livid red colour, thickened, and of twice its normal size. On its anterior surface was a dark pigmented radiating cicatrix. The tissues over the parotid and masseteric regions were swollen and hard, but not painful. The glands at the angle of the jaw were hard and enlarged. Hearing was but little impaired, there was no discharge, and no other lesion of the ear was detected. On the palms of both hands there were several desquamating spots. A diagnosis of syphilis was made, and rapid improvement took place under mercurial inunction. The history of the case was, that eight or ten weeks previously the man's ears had been licked by a prostitute. Four weeks after this, the affected ear became sore, and, eight weeks later, the spots appeared on the hands.

3842. *Seguin on the American Method of giving Potassium Iodide in very large Doses for the later Lesions of Syphilis, &c.*—Dr. Seguin states (*Archives of Medicine*, Oct. 1884) that by large doses of iodide of potassium he means from two and a half to ten drachms in the twenty-four hours. The indications and rules for giving such doses are these. 1. In chronic or subacute cases of ulcerative syphilide, or of nervous syphilis, Bumstead and Taylor's rules (see below) may be followed, and the patient gradually brought to take the full doses. 2. In rapidly extending ulcers, a daily dose of 150 to 225 grains should be given at once, and increased more rapidly in the ensuing week. If the throat be affected so that there is difficulty in swallowing the dose, the drug may be given by the rectum, or by means of a nasal stomach-tube. 3. In extremely acute syphilitic cranial pain, 60 grains should be given twice the first day, three times the second day, and so on. This would give on the seventh day an ounce of iodide. 4. In cerebral syphilis with coma or stupor, Dr. Seguin's practice is to begin with 60 grains every three or four hours, doubling the dose the next day. 5. A similar line of treatment should also be adopted in cases of localised numbness or localised epileptoid spasms (Jacksonian epilepsy). In nearly all acute cases, mercury is to be freely made use of as well as the iodide. In chronic or mild cases Bumstead and Taylor recommend adding 5 grains to the dose every other day. This rate of increase Dr. Seguin considers too slow; he usually increases the dose by 5, and in some cases by 10, grains every day. Iodide of potassium should be given largely diluted in water, a feebly alkaline water, or milk (Keyes) about half-an-hour before meals. As regards the dose for children, in urgent cases it should be almost the same as for adults. The author has given from 60 to 120 grains, three times a day, to patients between 4 and 8 years old, with good results, without causing iodism or gastro-intestinal irritation. The above are the practical points of a long paper, which is mainly occupied with a discussion on the origin of the practice of giving large doses of iodide of potassium in syphilis. Dr. Seguin, 'after considerable research and by means of personal inquiries,' has satisfied himself 'that this plan is originally American, and that reliable tradition indicates that the promoter and prophet of it was the late Dr. William H. Van Buren.' Further, the author is of opinion that Dr. Buzzard 'is the only European writer who has had the intelligent courage to disregard tradition and give iodide of potassium in doses sufficient to attain the results aimed at.'

3844. *Bricon on the 'Syphilococcus.'*—In a paper bearing this title and published in the *Progrès Médical*, Nos. 37, 38, 41, 1884, M. Bricon does not bring forward any new evidence of his own, but gives a summary of the views and experiments of numerous authors who have written on the hypothesis of the parasitic nature of syphilis. Judging from these various writings, the author is of opinion that the micrococcus of syphilis has not, up to the present time, been clearly distinguished from the similar organisms which are met with in many other diseases. A copious bibliography on the subject is appended to the paper, which will be useful to those who are interested in this question.

3845. *Sternberg on Further Experiments with the Micrococcus of Gonorrhœal Pus.*—In this paper, published in the *Philadelphia Med. News*, Oct. 18, 1884, Dr. G. M. Sternberg begins by referring to previous experiments in the same direction by himself and Dr. Hirschfelder, in which the result was negative. (*See* London Medical Record, April 1883, p. 161.) He then remarks that, in experimenting with the cultivated organisms, the cultures should always be carried beyond the fourth (this in reference to Bockhart's case), in order to insure exclusion of the original material, or of micrococci still infected with it. The experiments of Bockhart and of Welander make it extremely probable that the infective virulence of gonorrhœa does depend on the presence of the micrococcus, although pure cultures have no effect when introduced into the urethra. The explanation of this, which is most in accordance with observed facts, is, in Dr. Sternberg's view, 'that this micrococcus is a widely distributed and usually harmless organism, which may acquire specific pathogenic power as a result of special conditions relating to its environment, and which again loses this power when removed from the influence of the special conditions.' That this specific pathogenic power is not permanent is proved, in Dr. Sternberg's opinion, by the results of his own previous experiments, and still more conclusively by the following more recent ones on himself, on Dr. Keirle, and on Mr. Wegefarth, a medical student. On August 23, pieces of cotton saturated with a culture-fluid (ninth) which contained the organisms, were introduced well into the urethræ of all three gentlemen, and retained there for more than two hours. On the 27th, as no effect had been produced, Dr. Sternberg introduced into his own urethra, in the same way as before, a surface-culture (number eleven). In all three cases the results were negative. No discharge was produced. On August 29, Dr. Sternberg examined the secretion from the extremity of his own urethra, and found groups of micrococci exactly resembling those in his culture fluids, attached to some of the epithelial cells. These organisms, however, were less numerous than the bacteria which habitually infest the meatus urethræ. Since the above mentioned experiments were made, Dr. Sternberg has found organisms morphologically identical with those found in gonorrhœa in the pus of an abscess of the foot. Thus, Dr. Sternberg does not find that the 'gonococcus' of Neisser has any morphological peculiarities by which it can be distinguished from micrococci from other sources. He thinks these unicellular plants are subject to the modifying influence of changes in their environment as well as the higher plants, which we know may be dwarfed by deficient nutriment, or may acquire an unusual development as a result of artificial selection and cultivation. He also believes that the laws of heredity in conjunction with the various modifying influences to which these minute plants are subject in different situations, must tend to the establishment of varieties, and finally of species.—[Abstracts of the papers of Bockhart and Welander, referred to above, will be found in the London Medical Record, p. 500, 1883, and p. 446, 1884.—*Rep.*]

Arthur Cooper.

3846. *Preis on Syphilitic Chancre of the Uterine Cervix.*—In the *Russkaia Meditzina*, 1884, Nos. 34, 35, and 36, Dr. N. P. Preis, of Kharkov, publishes an interesting article on the subject, the summary of which may be given thus. 1. Syphilitic chancre of the vaginal portion of the womb presents a relatively frequent occurrence. [Of 400 patients, all prostitutes, admitted to the Kharkov Venereal Hospital for Women, forty had hard chancre, and in not fewer than six of the latter patients the initial ulcer was situated at the vaginal portion of the uterus. In five cases the ulcer occupied the whole circumference of the external os; in one, only a part. In two of the cases it spread into the cervical canal.] 2. Hard chancre in this situation possesses the usual characteristic features which make diagnosis extremely easy. [In two of the cases a well-marked induration was present.] 3. Hard chancre of the cervix heals slowly, notwithstanding active treatment. 4. Healing proceeds from the periphery to the centre. In the beginning, the newly formed scar presents an opalescence. In the course of time, the cicatrix becomes invisible. 5. Induration of the inguinal lymphatic glands is either absent or but slightly marked. The cervical glands are first attacked. 6. Constitutional syphilitic phenomena, following an initial ulcer of the uterine cervix, are usually mild. The relapses are also slightly pronounced; they occur at relatively longer intervals. 7. In the author's cases, cure followed mostly after twenty half-drachm inunctions. Five cases are given with all necessary details. In five of six patients, professional lipoma of prostitutes was found. (*See* the London Medical Record, 1884, July, p. 304.)

3847. *Zabolotsky on a Case of Syphilitic Re-infection.*—In the *Meditz. Obozrenie*, No. 21, 1884, p. 777, Dr. A. Zabolotsky, of the Miasnitzky Syphilitic Hospital, Moscow, details a case of a peasant, aged 22, who, after having been once treated and cured of syphilis by the author, eighteen months later was again admitted to the same hospital with: 1, typical hard chancres of five weeks' standing; 2, induration of the inguinal, cervical, and cubital lymphatic glands, and of the lymphatic vessels on the dorsum penis; 3, roseoloid syphilides of the belly, and papules of the scrotum, on which subsequently condylomata around the anus and gingival plaques supervened. The author does not entertain any doubt that he had to deal with a case of second infection from syphilis. [A similar rare case was reported in 1875 by Dr. Pospeloff, of the same hospital.]

3848. *Nevsky on a Case of Syphilitic Chancre of the Tongue.*—In the *Meditz. Obozrenie*, No. 21, 1884, p. 779, Dr. A. Nevsky, of Gorokhovetz, reports a case of hard chancre of the inferior surface of the left half of the tongue in a *virgo intacta*, aged 21, waitress at a rustic inn. The patient was first seen two months after she had noted the ulcer, and then presented enlargement and induration of the submaxillary, lateral, cervical, axillary, cubital, and inguinal lymphatic glands, papules of the angles of the mouth, and typical roseolæ over the neck, chest, and arms. The author believes that the patient contracted the ulcer through using a spoon after a syphilitic visitor.

3849. *Shadek on Primary Syphilitic Induration of the Fauces.*—Dr. K. Shadek, of Kiev, describes (*Meditz. Obozrenie*, No. 21, 1884) three cases of primary syphilitic affection of the fauces, two of which were observed in adults and one in a child, aged 3. In one of the cases the ulcer was situated on the left glosso-pharyngeal arch, in another on the right tonsil, and in a third (a child) on the left tonsil, soft palate, and uvula. The mode of infection remained unknown. On the ground of these three cases and of sixty-eight similar cases collected from literature, the author gives a detailed description of the etiology, symptoms, course, issue, diagnosis, prognosis, and treatment of primary syphilitic affection of the fauces. He thinks that constitutional syphilitic phenomena in the cases under consideration are comparatively less intense, and rapidly yield to specific treatment. The latter must be resorted to as soon as possible, since it accelerates the healing of the initial ulcer.

V. Idelson, M.D.

PHYSIOLOGY.

RECENT PAPERS.

3850. Bechtereff and Rosenbach.—On the Function of the Intervertebral Ganglia. (*Neurol. Centralbl.*, No. 12.)

3851. Horbacewicz, Erast.—On the Influence of Various Coloured Rays on the Development and Growth of Mammals. An experimental investigation. (*St. Petersburg Inaugural Dissertation*, 1883, p. 136.)

3852. Alexeeff, T.—On Absorption of Bile from the Intestinal Canal. A Contribution to the Study of Jaundice. (*St. Petersburg Inaug. Dissertation*, 1882.)

3853. Miropolskaia, M. A.—On the Transition of Solid Substances from the Mother's Blood into the Blood of the Fœtus. (*Vratch*, No. 46, 1884, pp. 776-8.)

3854. Rejchman.—On Digestion of Milk in the Healthy Stomach. (*Gazeta Lekarska*, No. 50, 1884; and *Vratch*, No. 1, 1885, p. 12.)

3855. Frédéricq.—Respiratory Innervation. (Du Bois Reymond's *Archiv*, 1883.)

3856. Aronsohn.—The Influence of Sugar-Puncture (of the Fourth Ventricle) on the Temperature of the Body, and more especially of the Liver. (*Deutsche Med. Wochensch.*, Nov. 13.)

3857. Bizzozero and Torre.—On the Production of Red Corpuscles in the Various Classes of the Vertebrata. (*Archivio per le Scienze Med.*, vol. vii., 1884.)

Art. 3850. *Bechtereff and Rosenbach on Function of the Intervertebral Ganglia.*—These observers (*Neurol. Centralbl.*, No. 12; *Centralbl. für die Med. Wiss.*, No. 45) experimented on dogs. They cut the collection of nerve-roots which originate from the lower part of the spinal cord. The dogs died in twelve to thirteen days, or were killed after two to three months. Amongst other effects which they attribute to the section, they found pronounced atrophic changes in the nerve-cells of the lower part of the cord. On the injured side many ganglion-cells had disappeared, while others were studded with vacuoles and destitute of nuclei. In the dogs which had died, the pathological processes had extended to the upper part of the cord. Bechtereff and Rosenbach conclude that the intervertebral ganglia are trophic centres, not only for the sensory fibres and roots of the spinal nerves, but also for cell-elements in the lower part of the cord. They regard the spreading of the degeneration to the upper part of the cord, not as a direct result of the nerve-section, but as an 'extension by contiguity.' R. Schultze objects to these conclusions. The degenerative effects observed by Bechtereff and Rosenbach have long been known to occur in man as a result of injury of the cauda equina, but he urges that there are no sufficient grounds for excluding traumatic influence and attributing the changes to purely trophic causes. Bechtereff and Rosenbach maintain that the changes in the cord are not of the nature of a traumatic inflammation, and that there are no inflammatory lesions of the spinal membranes; and, were the effects of a traumatic nature, they ought to involve the anterior roots as well, whilst, in the experiments conducted, the anterior roots have remained intact.

J. A. McWilliam, M.D.

3851. *Horbacewicz on the Influence of Coloured Light on Development and Growth of Mammals.*—In order to determine the action produced by different coloured rays of solar light on the development and growth of mammals, Dr. Erast Horbacewicz (*St. Petersburg Inaugural Dissertation*, 1883) undertook, under the guidance of Prof. P. F. Leshalt, numerous observations on newly born puppies. The results obtained by the author differ from those of Béclard (who made his observations on the larvæ of the domestic fly), Yung (*see* the LONDON MEDICAL RECORD, June 1879, p. 253), Schnetzler, and Pleasanton. They are these. 1. All the colours of the solar spectrum act favourably on the development and growth of mammals, though not in an identical degree. 2. The action of coloured rays is proportionate to the degree of their intensity in the spectrum. 3. White light, in its effect on development, stands lower than the brighter coloured rays of the spectrum. 4. The coloured lights, in their influence on development, may be arranged in the following decreasing order: red, orange, green, white, blue, and violet. Thus, the author's results for mammals coincide with those found by Pfeffer for plants. The author draws attention to a striking difference in the individual character of puppies according to the colour of light in which they lived and grew. Thus, 'green' puppies presented extreme liveliness, cheerfulness, and playfulness, accompanied by ease and gracefulness of movements; in addition, they were invariably good-humoured and kind. 'Orange' puppies were also prone to play, but their movements were heavy and awkward, and their temper was rather cross (they fought each other on the least provocation), and stubborn. 'Violet' and 'blue' puppies were of a quiet, almost apathetic disposition, the 'blue' especially so, since they never played. 'Violet' showed a curious fondness for barking. 'Red' puppies, also, did not manifest any liveliness. [We may as well mention here some other Russian contributions to the study of the biological action of light. They are: 1. Uskoff's article on the influence of coloured light on the protoplasm of the animal body, in the *Centralbl. für die Med. Wiss.*, No. 25, 1879. 2. A. T. Kondratieff's observations on the course of artificial septic infection in animals (rabbits) under different coloured rays, especially red, violet, and green (*St. Petersburg Inaugural Dissertation*, 1880). 3. Vvedensky's experiments in Prof. Setchenoff's laboratory on the action of light on sensibility in man and animals, in the *Transactions of the St. Petersburg Society of Naturalists*, 1882. 4. T. V. Godneff's researches into the effects of solar light on animals (man, worms, fishes, frogs, chicken, kittens, puppies) (*Kazan Inaugural Dissertation*, 1882).—*Rep.*]

3852. *Alexeeff on Absorption of Bile from the Intestinal Canal.*—Dr. T. Alexeeff (*St. Petersburg Inaug. Dissertation*, 1882), experimenting on dogs, introduced fresh or crystallised bile into the rectum, or into a drawn out intestinal coil, or through an intestinal fistula made in various parts of the bowels; and examined the urine, pulse, and temperature. He found the following results. 1. Absorption of the bile proceeds both from the small and the large intestines. 2. It goes on with greater energy from the ileum or jejunum than from the duodenum. 3. The bile is absorbed by the lymphatic vessels; after tying the ductus choledochus, the lymph of the great lymphatic duct gave a stronger reaction for bile-acids than the blood from the carotids. To study the action of bile on the animal system, Dr. Alexeeff carried out a long series of experiments on frogs. These experiments show that large doses of dissolved crystallised bile produce a gradual retardation of cardiac activity, and, finally, arrest of the heart's action. Small doses cause a primary acceleration of the cardiac beats, and then retardation. The author thinks that the acceleration depends on some as yet unknown action of the vagi, for it does not occur after their division; besides, the retardation of the heart in animals with the divided pneumogastric trunks is always observed in a more pronounced degree than in frogs with the intact vagi. The vagi, therefore, seem to retard the toxic action of bile-salts on the heart. (According to Dr. Alexeeff, who follows Professor V. V. Pashutin's teachings, the bile acts directly on the heart; that is to to say, it paralyses the cardiac ganglia). The bile has no influence on nerve-trunks and muscles. Small doses at first excite the cerebral reflex-inhibitory centres, and in this way lower the reflex action. Moderate doses paralyse the inhibitory centres; from this a rapid increase of reflex activity is observed. Large doses depress the spinal reflex centres (and that quite independently of the brain) and produce a sudden and considerable decrease of all reflex phenomena.

3853. *Mïropolskaia on the Penetration of Solid Particles from the Mother's Blood into the Fœtus.*—In the *Vratch*, No. 46, 1884, p. 776, Dr. M. A. Mïropolskaia, of Professor K. F. Slaviansky's clinic, describes her interesting experiments on rabbits and cats, undertaken to ascertain whether solid particles floating in the mother's blood are able to penetrate into the blood of the fœtus. In rough outline, her experiments consisted in the introduction of very finely powdered cinnabar into the jugular vein of the pregnant animal, and, after the animal's death, in searching for cinnabar in the fœtal body by means of destroying the latter by aqua regia, and of electrolytic examination of the residuum after evaporation. (This method of detecting mercury in the fœtus was suggested to the author by Professor A. P. Borodin.) The results were entirely negative. Hence the author arrives at the conclusion that all solid unorganised particles are not able to penetrate from the maternal blood into the fœtal system. She does not apply, however, this outcome of her observations to any organised solid particles (micro-organisms.)

3854. *Rejchman on Digestion of Milk in the Healthy Stomach.*—From thirty-six experiments on a healthy person Dr. Rejchman (*Gazeta Lekarska*, No. 50, 1884, and *Vratch*, No. 1, 1885) draws the following conclusions. Milk, introduced in the quantity of 300 cubic centimètres, completely disappears from the stomach by the end of four hours; however, the digestion properly is completed somewhat earlier (by the end of three hours after its introduction). It coagulates within five minutes after its being taken. The coagulation is not dependent upon the quantity of gastric acids, but probably depends upon the action of milk-ferment (Hammarsten). The acidity of the contents of the stomach reaches its maximal level by the end of twenty-five minutes after the introduction of milk. Peptones are detected not earlier than thirty minutes, and not later than two hours, after the introduction of milk. In the beginning of digestion, a considerable quantity of parapeptones is present.

V. IDELSON, M.D.

3855. *Frédéricq on Respiratory Innervation.*—L. Frédéricq (Du Bois Reymond's *Archiv*, 1883; Suppl. Band, *Festschrift*, p. 51) controlled respiration in the rabbit by alternately cooling and warming the floor of the fourth ventricle. He applied cold by small pieces of ice, and found that it delayed the expiration (now active, instead of passive); and this made the breathing slow, though it did not cease altogether. After removing the ice, and gently drying and rubbing with cloths, warmth was applied by radiating heat, whereupon the breathing was quickened again. If the cold were applied so as to act through the membrana obturatoria (tentorium cerebelli), as by ether evaporation or freezing mixtures, the respiration could be arrested altogether, while the heart was still beating. In animals with slower breathing from cooling of the medulla or poisonous doses of chloral, irritation of the central end of the severed vagus in the neck caused stoppage of the breathing in expiration, and death sometimes followed immediately. The author, therefore, assumes that cold acts by lessening the excitability of the medulla oblongata. Since destruction of the 'nœud vital' acts after the cold as before, while irritation of the inhibitory fibres (by which Brown-Séquard and Langendorff explain the action of this spot) is quite excluded by the influence of cold, Frédéricq thinks his experiments prove the existence of the respiratory centre in the medulla oblongata, and (except in young animals under strychnine) the functional dependence of the deeper lying respiratory muscular centre upon the former. In rabbits, and still more in ducks, dipping the snout or bill respectively in water (or even sprinkling with water) causes expiratory arrest of the respiration, which in ducks may last for twelve minutes. In the rabbit, inspiration is the first respiratory movement (and it follows far sooner); in ducks, expiration.

E. J. EDWARDES, M.D.

3856. *Aronsohn on the Influence of the Sugar-Puncture (of the Fourth Ventricle) on the Temperature of the Body, and more especially of the Liver.*—Aronsohn (*Deutsche Med. Wochensch.*, Nov. 13, 1884) has experimented on rabbits on this point, which has until now been undecided. Clinical observation has shown that in the diabetic there is often subnormal temperature, which may fall as low as 85·4 in the rectum. This might be explained by the loss of fuel through the excretion of sugar, if there were a constant proportion between the temperature of the body and the elimination of sugar; which is, however, by no means the case. Claude Bernard, who was the author of the 'sugar-puncture,' thought that the temperature of the liver was increased by this proceeding, inasmuch as irritation of the medulla oblongata on the floor of the fourth ventricle caused an increased supply of blood, and therefore greater activity of the glandular elements of the liver. Subsequent observers, such as Heidenhain, Schreiber, and others have supported this view; while Naunyn has come to the result that there was rather a diminution of pressure in the blood-vessels. Aronsohn determined in his experiments the temperature in the rectum by the thermometer, and in the muscles and the liver by thermo-electricity with Wiedemann's compass. The general result was that where the sugar-puncture, made according to Bernard's directions, succeeded without injuring any neighbouring portions of brain, the temperature of the liver, the muscles, and the rectum, fell, within two hours after the operation, by 3°·7. If other parts of the cerebral substance were injured, the temperature fell in the beginning of the experiment, but returned after a time to the previous standard. Again, where the sugar-puncture failed altogether, and where only the pons Varolii or the sides of the medulla oblongata were injured, the temperature was noticed to rise without previous fall, by 2°·7.

JULIUS ALTHAUS, M.D.

3857. *Bizzozero and Torre on the Production of the Red Corpuscles in the Various Classes of the Vertebrata.*—In all adult vertebrates, there is a continuous production of red corpuscles by indirect scission of young forms from pre-existing red corpuscles. There exist, in all adult vertebrates, special organs, which must be considered as foci, in which the production of new red corpuscles especially takes place. These organs are represented in the mammalia, birds, reptiles, and anurous amphibia by the medulla of the bones; in the urodelous amphibia by the spleen, and in fishes not only by the spleen, but also by that lymphoid parenchyma, which in these animals occupies a greater or less part of the kidney. In the lower vertebrates (reptiles, amphibia, and fishes) the circulating blood presents the peculiarity which in the embryonic state is observed in all vertebrates; it contains, that is, in greater or lesser number, young red corpuscles, and forms from indirect scission. But both are found in much less number than in the organs which form for the different orders of animals the hæmatopoietic forms. This survival, so to say, of the embryonic state of the circulating blood, becomes more marked in those animals which were subjected to bleeding, and, on the other hand, became less apparent or disappeared almost entirely under those conditions (absence or insufficient nutriment, captivity, &c.), which induce a diminution of the general activity of the organism.

G. D'ARCY ADAMS, M.D.

ANIMAL CHEMISTRY.

RECENT PAPERS.

3858. SEEGEN.—On the Sugar of the Blood; its Source and its Amount. (*Pflüger's Archiv*, vol. xxxiv.; *Centralbl. für die Med. Wiss.*. No. 46.)

3859. VON REGECZY.—On the Diffusion of Egg-Albumin.—(*Pflüger's Archiv*, vol. xxxiv.; *Centralbl. für die Med. Wiss.*, No. 47.)

3860. GRÉHAUT AND QUINQUAUD.—On Urea Poisoning. (*Compt. Rend.*, tome xcix.; *Centralbl. für die Med. Wiss.*, No. 47.)

3861. PASCHUTIN.—On Glycogen. (*Centralbl. für die Med. Wiss.*, No. 40.)

3862. MCMUNN.—New Animal Pigments. (*Physiological Society*, Dec. 1884.)

3863. OGATA AND OTHERS.—Experiments on Digestion. (*Bied. Centr.*, 1884.)

ART. 3858. *Seegen on the Sugar of the Blood; its Source and its Amount.*—Seegen's experiments were conducted upon the dog (*Pflüger's Archiv*, vol. xxxiv.; *Centralbl. für die Med. Wiss.*, No. 46). He found sugar constantly present in the blood, and in nearly equal amount in venous and arterial blood, as a rule. Blood taken from the vena portæ he found, however, to be almost invariably much poorer in sugar than blood from the hepatic veins or from the carotid artery. As an average of thirteen experiments, he states the amount of sugar in the portal blood to be ·119 per cent., while the percentage in the hepatic blood is as high as ·23 per cent. The amount of sugar sent into the circulation depends largely on the rapidity of the blood-stream. Seegen estimated the daily blood-flow through the liver by an apparatus connected with the portal vein, and then calculated the amounts of sugar obtained in different cases; but the estimates arrived at varied widely, and were based on a comparatively small number of experiments, so that no great weight can be attached to them. In illustration of the sugar-forming function of the liver, Seegen adduces a number of results which he obtained after isolation of the liver from the circulation. He ascertained the percentage of sugar in the blood of the carotid artery, and then tied the aorta and vena cava inferior so as to prevent the composition of the blood from being affected by the products of hepatic action. After half an hour to one hour he again tested the blood of the carotid for sugar, and found that the quantity present had fallen to one-half or one-third of its original amount. Much caution, however, is required in drawing inferences from such an experiment as this; the effects mentioned may be due to a complex series of changes which are very difficult of interpretation. And, indeed, the complexity of the experiment is shown by an observation of Seegen's that ligature of the vena cava inferior sometimes gives rise to a marked rise in the percentage of sugar in the carotid blood—a change for which no explanation is offered.

3859. *Von Regeczy on the Diffusion of Egg-Albumin.*—By diffusion experiments with animal membranes, blotting paper, writing paper, &c., the author comes to the following conclusions (*Pflüger's Archiv*, vol. xxxiv.; *Centralbl. für die Med. Wiss.*, No. 47). 1. Albumin diffuses more readily towards salt solution than towards distilled water; indeed, the diffusion is accelerated in proportion to the concentration of the salt solution. 2. From weak albuminous solutions the albumin diffuses more readily than from strong solutions. 3. When the albumin solution is mixed with salt, the albumin diffuses less readily than it would do were the albumin solution free from salt. The difficulty in diffusion is proportionate to the amount of salt admixed. 4. Albumin diffuses towards salt solution through a membrane of such a thickness and density as would not allow its diffusion towards water. 5. Pressure assists the diffusion of albumin when it acts on the side of the albuminous solution. Von Regeczy thinks that albumin may in some instances pass into the urine without injury of the renal epithelium, under physiological conditions.

3860. *Gréhaut and Quinquaud on Poisoning by Urea.*—These authors (*Compt. Rend.*, tome xcix.; *Centralbl. für die Med. Wiss.*, No. 47, 1884) fou that subcutaneous injection of watery solutions urea, when the dose amounted to $\frac{1}{100}$ to $\frac{1}{30}$ of t body-weight (in frogs, guinea-pigs, rabbits, a pigeons), caused tonic and clonic spasms of t muscles generally, followed after a variable ti (forty minutes to three hours) by death from sto page of the respiratory movements. In the blo of the animals thus killed, there was found urea i the amount of ·66 to ·82 per cent. Dogs died wh the amount of urea injected was 1 per cent. of t body-weight; the amount of urea found in the blo after death was ·6 per cent. All the organs we found to be overloaded with urea, especially the liv and spleen. No ammonia was obtained from th blood of the animals killed by injection of urea. I is worthy of note that the solution of urea administered subcutaneously was not found to be fully absorbed at the time of death, even when th animals had not died for ten hours. In the blood of man the authors found, in a case of suppressio of urine, urea to the amount of ·41 per cent.; in case of retention of urine, ·28 per cent.; and in fatal case of uræmic coma, ·22 per cent.

3861. *Paschutin on Glycogen.*—Paschutin, some years ago, advanced the idea that diabetes mellitus might be due to a morbid form of carbohydrate degeneration, involving many of the tissues and not confined to a single organ, *e.g.* the liver. He thinks that such a degeneration may possess optical characters of such a sort as to prevent its being obvious microscopically, as fatty degeneration is. He thinks that the difference between the two forms of degeneration consists in a different metamorphosis of the proteids. In both cases the proteid body yields, 1, a nitrogenous moiety which appears as urea; and, 2, a non-nitrogenous moiety which becomes in the one case fat, and in the other case a carbohydrate. In his recent investigations (*Centralbl. für die Med. Wiss.*, No. 40), Paschutin has examined the amount of carbohydrate (glycogen) found in the various tissues—1, in the normal condition; and, 2, in various states of disturbed nutrition. He has not examined the fresh diabetic tissues of man or of animals. The animals dealt with were killed by bleeding. The organs were quickly cut out, chopped up, and thrown into boiling water. Then they were treated with concentrated solution of sodium carbonate to strong alkalinity, and extracted. The sodium carbonate solution was found to be useful, not only in preventing fermentative changes (when the experiments were prolonged), but also in assisting the extraction of glycogen from the bones and cartilages, which do not readily yield it to distilled water. He found that the embryonic skeleton of the calf not only contains glycogen, but is very rich in that substance. (Bernard had found no glycogen in the fœtal skeleton.) In adult animals (dog alone used) glycogen was found in the liver and muscles; also, with few exceptions, in the lungs, testes, and skin; none found in the healthy brain. In the adult skeleton, glycogen was always found, in small amount in the bones, but in large quantity in the cartilages, the latter indeed resembling the muscles as regards their richness in glycogen. Nearly nine-tenths of the body contain glycogen as a constant constituent, not only in intra-uterine, but also in adult life. Landwehr has recently found in various tissues (salivary glands, brain, and lungs) a carbohydrate substance ('achrooglycogen'), which does not give the characteristic iodine reaction. With a view to investigate the presence of glycogen in pathological conditions of various tissues, Paschutin injected dilute ammonia or croton-oil into the brain, lungs, and testis; he brought about cutaneous irritation by means of croton-oil or hot water. When one application of the irritant was used, he examined the tissue in from seven hours to two days. In the brain he found glycogen, though in small amount; in all the other inflamed tissues glycogen in significant quantity; also in fresh pleural exudation. Paschutin refers the origin of this glycogen to a 'carbohydrate degeneration,' or 'glycogenic' degeneration of the tissues. Von Frerichs, on the other hand, holds that the glycogen found in inflammatory exudations may be ascribed to the presence of leucocytes which have migrated thither. And it is difficult to see how, in the case of inflammatory products, the agency of the latter can be excluded.

3862. *McMunn on New Animal Pigments.*—Dr. C. A. McMunn (*Proceedings of Physiological Society*, Dec. 13, 1884) has demonstrated and described an important new pigment in muscular tissue, a pigment which he terms 'myo-hæmatin,' and which seems to be the cause of the red colour of ordinary striped muscle: a colour formerly attributed to the presence of hæmoglobin. Myo-hæmatin is widely distributed, both among vertebrates and invertebrates. It has been found in the cardiac and voluntary muscles of all the vertebrates examined; also in the muscles of insects and spiders, and in the heart of the snail, slug, crayfish, &c. The spectrum of myo-hæmatin can be seen without the use of any re-agent; it shows bands which are remarkable for their extreme narrowness. Three well-marked bands occur; one before the Frauenhofer line D, and two between the lines D and E. Two faintly defined bands may be seen near the violet. Besides myo-hæmatin, Dr. McMunn describes a series of new tissue-pigments in the organs of vertebrates and invertebrates: a series of bodies which he proposes to call 'histohæmatins.' He also announces the discovery of hæmochromogen in the medulla of the suprarenal body—a statement of much interest and importance with reference to the genesis of the peculiar condition known as Addison's disease.

J. A. MCWILLIAM, M.D.

3863. *Ogata and Others on Digestion.*—M. Ogata (*Bied Centr.*, 1884) finds that, when the mucous membrane of the stomach has been removed, the glands of the large intestine are capable of digesting flesh, raw and cooked eggs, as well as other finely divided albuminous foods that are easily decomposed by the secretions. Edinger (*ib.*) is of opinion from his investigations that an acid reaction only shows itself in the stomach. Falk (*ib.*) finds that yeast is not affected in its action by trypsin, but bile soon precipitates its invertin. Alcoholic fermentation is not hindered by saliva, bile, or pancreatic juice; but gastric juice or dilute hydrochloric acid prevent it, while bacteria rapidly destroy yeast. Zawarykin (*ib.*) has noticed the lymph-cells and leucocytes taking up the fatty granules by a sort of amœboid movement, and in this way carrying the fat into the blood. Voigt (*ib.*) finds that bile plays a most important part in the absorption of fat. While the solids of bile depend greatly on the amount of nourishment taken, its general composition does not appear to be influenced by the food itself. In the digestion and absorption of the albumin of flesh, Voigt further finds that the bile is comparatively inactive.

T. CRANSTOUN CHARLES, M.D.

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

3864. WEICHSELBAUM.—Tuberculosis of the Œsophagus. (*Wiener Med. Wochensch.*, No. 6, 1884.)

3865. JONES, SYDNEY.—Two Cases of Disease of the Thyroid Gland: Removal of the Isthmus and part of the Lateral Lobes. (*Lancet*, Aug. 30, 1884.)

3866. SIMON.—Laryngeal Polypus in a Child. (*Jour. de Méd. et de Chir. Prat.*, Jan. 1884.)

3867. HERING.—Foreign Bodies in the Larynx and Œsophagus. (*Revue Mensuelle de Laryngologie*, March 1884.)

3868. LADANYI.—A Bean in the Trachea. (*Wiener Med. Wochensch.*, No. 5, 1884.)

3869. SCHMIDT.—Subglottic Laryngitis. (*Centralbl. für Klinische Med.*, No. 16, 1884.)

3870. STEPANOW.—Hæmorrhagic Laryngitis. (*Monatsschrift für Ohrenheilkunde*, No. 1, 1884.)

3871. GRÉGOIRE.—Contribution to the Study of Tracheotomy in Tuberculous Patients. (*Thesis*, Paris, 1884.)

3872. JONES.—A Case of Extirpation of the Larynx. (*Lancet*, Aug. 2, 1884.)

3873. CHARAZAC.—Syphilitic Gumma of the Larynx. (*Revue Mensuelle de Laryngologie*, Sept. 1884.)

3874. GAREL.—A New Laryngo-phantom. (*Revue Mensuelle de Laryngologie*, March 1884.)

3875. LANGE.—Adenoid Vegetations in the Vault of the Pharynx. (*Deutsche Med. Wochensch.*, No. 51, 1883.)

3876. BALDING.—Sarcoma of the Tonsil. (*Lancet*, Aug. 23, 1884.)

3877. MACKENZIE.—The Toxic Effects of Chrome on the Throat, Nose, and Ear. (*Annales des Maladies de l'Oreille, du Larynx, &c.*, Sept. 1884.)

3878. BELL.—A New Method of Extirpating Nasal Polypi. (*Canad. Med. Record*, Feb. 1884.)

3879. WHEELER.—Two Cases of Pharyngotomy. (*Lancet*, July 5, 1884.)

3880. MIKULICZ.—Two Cases of Fibrous Nasal Polypi. (*Deutsche Med. Zeitung*, No. 4, 1884.)

3881. PETERSEN.—Subperichondrial Resection of the Cartilaginous Nasal Septum. (*Deutsche Med. Zeitung*, No. 4, 1884.)

3882. HUNT.—Cystic Tumour of the Thyroid Body. (*Brit. Med. Jour.*, July 5, 1884.)

3883. LEFFERTS.—Hæmorrhage after Tonsillotomy. (*Archiv. of Laryngo.*, vol. iii., No. 1.)

ART. 3864. *Weichselbaum on Tuberculosis of the Œsophagus.*—The question raised by Zenker and von Ziemssen in Ziemssen's *Handbuch der Speziellen Pathologie*, whether tuberculosis ever appears in the œsophagus is, says the author, not a surprising one, seeing that it is exceptional to find it there. In the literature of the subject accessible to him, he has only found two cases which appear beyond doubt to have been tuberculosis in this situation. The following case, in which the marked tuberculous character of the ulceration was further verified by the presence of tubercle-bacilli, is reported by him in the *Wiener Med. Wochensch.*, No. 6, 1884. A woman, aged 36, had suffered from enlarged cervical glands for six weeks. When admitted into the hospital, the glands in the upper clavicular region were swollen, especially on the left side, and here a fluctuating tumour, of the size of a goose's egg, was present. This was incised, and again two months later, giving exit to curdy pus. There was then no suspicion of lung-mischief. Four months later, a fluctuating swelling had formed in the neighbourhood of the larynx, and this was also opened. In the meantime, symptoms that the lung was affected had shown themselves, and the patient died shortly afterwards of marasmus. At the necropsy, the supraclavicular and mediastinal glands were of the size of pigeons' eggs, and were caseous, and some of them softened and suppurating. Three finger-breadths above the bifurcation of the trachea there were several small perforations, four in the hinder wall of the trachea, and eight in the front wall of the œsophagus. These small apertures communicated with the broken-down lymphatic glands. Above and below these perforations, the mucous membrane and submucous tissue of the œsophagus in its whole extent was closely studded with tubercles, varying from the size of a poppy-seed to a pea; the smallest were grey, the larger yellow and caseous. Many had ulcerated. At the cardiac end they ceased abruptly, and the pharynx was also free. In the trachea scattered tubercles were present; while below the perforations, and in both bronchi and their large branches, they were as numerous as in the œsophagus. The lungs were also affected with tubercle, but to a less degree. In the posterior mediastinum, the lymphatic glands along the thoracic portion of the œsophagus were enlarged and caseous. Dr. Weichselbaum remarks that the question why tubercle rarely attacks the œsophagus can be answered now that its specific or parasitic nature is recognised. While tubercle in the digestive tract can in a large number of cases be traced to infection from the swallowing of tuberculous sputa, milk, food, &c., the œsophagus remains uninfected, owing to the rapidity with which such food, sputa, &c., pass down it.

3865. *Jones on Two Cases of Disease of the Thyroid Gland: Removal of Isthmus and Part of Lateral Lobes.*—These cases are reported in the *Lancet*, Aug. 30, 1884. The first patient was aged 24, the second 17. In both, the isthmus, with part of the lateral lobe of the thyroid, was ligatured in two places and cut away. Subsequently to the operation, what remained of the lateral lobes dwindled in size, and the patients were relieved of their symptoms.

3867. *Hering on Foreign Bodies in the Larynx and Œsophagus.*—Dr. Hering records five cases that have been under his own observation (*Revue Mensuelle de Laryngologie, &c.*, March 1884). 1. A young woman, during a fit of coughing, swallowed a threaded needle, which she was holding in her mouth. The thread was broken in the attempt to pull the needle out by it. She complained of pain in the larynx, and could swallow neither solid nor fluid food. Eight days afterwards she was seen by Dr. Hering. Laryngoscopic examination was very difficult, owing to the extreme sensibility of the patient and the swelling of the parts. After some trouble the needle was found sticking across the larynx, its point having apparently perforated the thyroid cartilage. As it was found impossible to remove it whole, it was cut in two with Tobold's forceps, and each part removed separately. 2. A child, three years old, swallowed a metal buckle, and was seized with symptoms threatening suffocation. The next day he was put under chloroform, and with the laryngoscope the buckle was seen leaning on one side against the anterior part of the vocal cord, and on the other against the arytænoid cartilage. Preparations for tracheotomy were made, in case the buckle changed its position and fell into the trachea. After various efforts to seize it, it was at last extracted with Tobold's forceps, the index finger of the left hand being passed into the larynx to act as a guide, and to help to disengage it. 3. A woman, while eating a cutlet, swallowed a piece of bone, after which all attempts to swallow caused pain and spasmodic cough. Nothing could be felt on passing a sound, nor by digital exploration. A laryngoscopic examination was made, and the bone was discovered on the left vocal cord, under the arytænoid cartilage, perforating the arytænoideus muscle and mucous membrane, and fixed half in the œsophagus, and half in the larynx. A strong forceps was passed, and by opening the blades and pressing one against the posterior surface of the cricoid cartilage, and the other against the wall of the pharynx, the larynx was separated as much as possible from the posterior wall of the pharynx, so that the bone could be seized and extracted. 4. A child, 5 years old, thought she had swallowed a copper coin with which she was playing and had lost out of her hand. An emetic was given, and the sound passed down the œsophagus, but the coin could not be found. As the child seemed still much distressed, when taking even only fluid nourishment, a further search was made, eleven days afterwards, while she was under chloroform. The contact of the forceps in the œsophagus brought on a violent fit of coughing, so that the offending body was immediately rejected. This proved to be, not a coin, but an India-rubber band, 5 centimètres long, which had evidently escaped detection by lying flat along the side of the œsophagus. 5 A boy, aged 6, who had swallowed a piece of bone the night before, was threatened with suffocation, and brought into the hospital. The bone could be felt with the finger behind the epiglottis, but was so fixed that it could not be moved. A laryngoscopic examination was made under chloroform, and a bony fragment, flat and triangular, was seen vertically placed between the vocal cords. Türck's forceps were introduced, and, after some difficulty in grasping and freeing it, it was extracted entire. The bone measured along its three sides 15, 18, and 28 millimètres respectively.

3868. *Ladanyi on a Bean in the Trachea.*—A boy, while playing with some beans (*Wiener Med. Wochensch.*, No. 5, 1884), accidentally swallowed one, which passed into the trachea. For two days attacks of dyspnœa occurred at intervals, but then became so severe and prolonged as to threaten life. Tracheotomy was performed, and attempts were made to extract the bean with forceps. These attempts were not successful, although the bean came into sight when the patient coughed. It was finally expelled the next day through the tracheal opening, during a violent expiratory effort.

3870. *Stepanow on Hæmorrhagic Laryngitis.*—A woman, 47 years old (*Monatsschrift für Ohrenheilkunde*, No. 1, 1884; *Revue Mensuelle de Laryngologie, &c.*, Sept. 1884), was suffering from aphonia and hæmoptysis, which had come on after taking a chill. Every day, or every other day since then, she had raised blood, sometimes liquid, sometimes in clots. She had had the same symptoms three years before. There were no signs of lung-disease. With the laryngoscope, clots of blood were seen adhering to the inferior surface of the vocal cords; the superior surface was pale red; the other part of the larynx was a little hyperæmic. There was paresia of the thyro-arytenoid muscles. Dr. Stepanow did not succeed in removing the clots. In about a month the symptoms had disappeared. In a second patient, a woman aged 40, the symptoms, appearance, and termination of the affection were the same as in the former case. These two cases, as well as others recorded by Navratil, Frankel, and Böcker, present the following points in common. 1. All the patients were women. 2. The first stage was one of laryngitis; to this succeeded the symptoms of hæmorrhagic catarrh; and, when this had ceased, the simple laryngitis still persisted. 3. The hæmorrhage was often repeated, and tolerably abundant. 4. It came on sometimes after a fit of coughing, and sometimes without appreciable cause. 5. It could be distinguished from simple laryngitis, by the presence of clots upon the mucous membrane and the vocal cords.

3872. *Jones on a Case of Extirpation of the Larynx.*—The subject was a man, aged 44 (*Lancet*, Aug. 2, 1884). The operation was undertaken for the removal of a growth springing from the epiglottis and invading the larynx. Tracheotomy was performed four days previously. The thyroid cartilage was divided in the middle line, and the growth found to be so extensive that the whole of the larynx, together with the first ring of the trachea, was removed. It was also found necessary to cut away the anterior and lateral walls of the pharynx, only a portion of its posterior wall being left. This was subsequently divided and united to the skin-incision. The patient was fed at first by enemata; but, on the evening of the day following the operation, an œsophagus-tube was passed, and a pint of milk introduced into the stomach. After this, feeding in this way was continued. The principal trouble attending the after-treatment was the escape of saliva into the trachea. This was overcome by one of Foulis's tubes. On the eighth day the sutures attaching the œsophagus to the skin were removed, and the œsophagus was allowed to fall back, re-establishing its connection with the mouth. He progressed favourably, and was discharged, wearing a Foulis's tube, and taking nourishment by the mouth. He had gained a stone in weight. The growth was found to be an epithelioma.

3873. *Charazac on Syphilitic Gumma of the Larynx.*—This case is reported in the *Revue Mensuelle de Laryngologie*, September 1884. A lady, aged 29, had since her marriage contracted syphilis, and now came under Dr. Moure's treatment for persistent sore-throat; respiration was good, but the voice was hoarse, and swallowing rather painful. On laryngoscopic examination there was a marked swelling in the arytænoid region, specially about the crico-arytænoid joint, which was immovable, and, as it were, ankylosed. The mucous membrane generally was smooth and red, but a yellowish projection could be seen in the ary-epiglottidean fold, and was diagnosed as a gumma. Syphilitic remedies were prescribed, but were not properly taken. Having one night (March 27) been exposed to cold, respiration became suddenly impeded, and the right half of the larynx, which up to that time had remained intact, became affected, the vocal cord on that side being almost immovable. The next night a violent fit of dyspnœa came on, and one again the following day. Tracheotomy was therefore performed. On June 6 specific treatment was resumed; on June 9 the symptoms had much improved; by June 11 the larynx was almost normal; and on the 14th the specific treatment was left off. Some little time after, all trace of inflammation had disappeared, and there only remained a slight stiffness of the left crico-arytænoid articulation. Dr. Charazac remarks that in this case it was not the primary syphilitic lesion of the larynx that necessitated tracheotomy, but an acute paralysis of the dilator of the opposite side, which, following the exposure to cold, was now added to the already existing paralysis of the left side. The gumma had existed, as had also the œdema, for some time, and had not caused any respiratory trouble. Dr. Charazac points out how quickly the paralysis disappeared, no trace of it remaining six days after the operation; and how soon the gumma was absorbed when once the syphilitic treatment was properly carried out.

3874. *Garel on a New Laryngo-phantom.*—This instrument, a description of which is published in the *Revue Mensuelle de Laryngologie*, March 1884, is made on the same plan as that of Professor Labus, of Milan. It is provided, however, with an electrical apparatus so arranged that, when certain spots in the artificial larynx are touched with a laryngeal sound, a small gong rings, and an indicator fixed in front of the apparatus marks the spot that has been actually struck inside. By this means, therefore, the student is taught to touch with precision any part of the larynx previously decided on, and the indicator shows whether or not he has done so. It is further provided with a contrivance for fixing small artificial polypi, made of gum mastic, to various parts of the vocal cords, &c., that the student may practise their removal by forceps, snares, &c. It has been found of great use in Professor Garel's clinique.

3875. *Lange on Adenoid Vegetations in the Vault of the Pharynx.*—Dr. Lange gave an address on this subject in the rhino-laryngological section at the meeting of naturalists and physicians in Freiburg (*Deutsche Med. Wochensch.*, No. 51, 1883). He regards the affection as congenital, although he believes that it generally requires some years before it is manifested by symptoms. From a statistical table of 180 cases which he has compiled, it appears that the age at which the greatest number of children come under observation is from 10 to 15; but, according to the statement of the parents, the symptoms generally first show themselves between the ages of 4 and 6. It is not usually until some amount of deafness is noticed that the child is brought to the surgeon. For removing the vegetations, Dr. Lange still gives the preference to his ring-knife. He proceeds as follows. The patient is made to sit with his hands firmly secured to the arm of a chair, his face turned to the light, mouth wide open, and head held by an assistant. Having ascertained the position of the vegetations, Dr. Lange passes his knife quickly behind the soft palate, and moving it from one side to the other, and in an upward and forward direction, cuts away the growths in about ten or fifteen seconds. The patient rids himself of them by blowing his nose violently or spitting them up. Rinsing the nostrils and naso-pharynx with lukewarm salt and water completes the operation. Dr. Lange, as a rule, finds one sitting sufficient to remove the vegetations. He does not consider it essential to entirely clear the naso-pharynx from them, and none of his patients has ever had a return of the symptoms.

3876. *Balding on Sarcoma of the Tonsil.*—This specimen was exhibited before the Cambridge Medical Society on July 4 (*Lancet*, Aug. 23, 1884). The patient first came under observation for alarming hæmorrhage from the mouth. There was then complete fixity of the lower jaw, which rendered any examination of the mouth or throat impossible, some ill-defined indurated swelling in the neck, and fœtor of the breath. Sore throat had been complained of for a month. The hæmorrhage stopped spontaneously. The swelling of the neck increased, and suppuration ensued, but subsequently subsided. For a fortnight previous to death the swelling had encroached upon the trachea. At the necropsy, a firm growth was found involving the left tonsil. It extended into the submaxillary region, inflating the glands and surrounding structure. Its microscopical characters were those of a round-celled sarcoma.

3877. *Mackenzie on the Toxic Effects of Chrome on the Nose, Throat, and Ear.*—An interesting paper on this subject was read by Dr. John Mackenzie at the American Medical Association in May (*Annales des Maladies de l'Oreille, du Larynx, &c.*, Sept. 1884). In the chrome factory at Baltimore, workers employed in the chambers where the bichromate is made, almost invariably acquire perforation of the cartilaginous septum from the irritating and corrosive action of the fumes. This destruction of the septum appears to be the most prominent anatomical lesion, and occurs so frequently that it may be looked upon as a characteristic sign of this form of poisoning. The perforation occurs with great rapidity, generally within a few days after exposure to the exciting cause. It is usually preceded by congestion of the mucous membrane, with more or less epistaxis, or by symptoms of a well-defined coryza. The mucous covering of the septum is quickly destroyed, and the cartilage laid bare. Necrosis of the latter soon follows. The perforation varies greatly in size, and Dr. Mackenzie has seen almost complete destruction of the cartilaginous septum, nothing remaining but the merest rim of tissue to support the fleshy substance of the external nose. The most frequent seat is the anterior inferior portion of the cartilage, that part most directly exposed to the dust and fumes. But the destructive process may occasionally be met with elsewhere, as the turbinated bodies and the naso-pharynx. There is generally inflammation of the lower respiratory tract as far down the trachea as the laryngoscopic view extends. In fact, the mucous membrane of the entire naso-bronchial tract is intensely hyperæmic, more or less swollen, and presents at various points evidences of capillary hæmorrhage or small extravasations of blood. Purulent inflammation of the tympanum may also occur, with perforation of the membrane and consequent otorrhœa. There is also a sensation of heat in the throat and nose, and sometimes intense headache. The discharge is profuse and purulent, and has a tendency to become inspissated and to form crusts. In spite of this there is no fœtor, which is probably due to the destructive effect of the agent exciting the discharge. The absence of fœtor, the effect of simple medication, the limitation of the process, and the absence of deformity of the external nose, are signs which distinguish this form of ulceration from syphilis.

3879. *Wheeler on Two Cases of Pharyngotomy.*—This paper was read before the surgical section of the Academy of Medicine in Ireland on April 4, and is reported in the *Lancet* of July 5, 1884. The first case was that of a man who swallowed a threaded needle, eye foremost. His efforts to withdraw the needle by pulling the thread only served to imbed the point more deeply. Other means failing, pharyngotomy was undertaken for its removal, with success. In the second case, pharyngotomy was performed for the removal of a small tumour situated below the level of the epiglottis in the sinus pyriformis. It was removed piecemeal, and was found to spring from the styloid ligament and process. The patient made a good recovery, but succumbed to a return of the disease a few months later.

3880. *Mikulicz on Two Cases of Fibrous Nasal Polypi.*—The author has lately successfully removed two very large naso-pharyngeal polypi through the mouth after division of the palate (*Deutsche Med. Zeitung*, No. 4, 1884; *Revue Mensuelle de Laryngologie*, March 1884). The advantages of this method are these. 1, Hæmorrhage can be easily controlled; 2, the polypus can be radically removed; 3, should it return, it can be seen through the mouth and removed; 4, there is no resulting external deformity nor functional lesion.

3881. *Petersen on Subperichondrial Resection of the Cartilaginous Nasal Septum.*—The following method has been successfully employed by Dr. Petersen in three cases (*Deutsche Med. Zeitung*, No. 4, 1884). With a very narrow-bladed knife a vertical incision is made on the convex side of the septum, as far back as possible; then a horizontal incision from behind forwards, corresponding to the inferior border of the cartilage of the septum; and, finally, a vertical incision, corresponding to the anterior part of the nostril. These incisions comprise all the tissues situated over the cartilage. With an elevator the mucous membrane is separated, the inferior border of the cartilage is cut, and through the orifice thus obtained the opposite mucous membrane is detached. The cartilage thus freed on both sides from the mucous membrane is cut off, and the flap secured by their angles The wound is dusted with iodoform and alum till it has healed.

3882. *Hunt on a Cystic Tumour of the Thyroid Body.*—A woman, aged 46 (*Brit. Med. Jour.*, July 5, 1884), was suddenly seized with dyspnœa. A lump, of the size of an orange, in the situation of the thyroid gland, was stated by a neighbour to have increased in the course of a few minutes from the size of a walnut. The patient was by this time senseless and livid. Nitrate of amyl and chloroform and artificial respiration were tried without the least effect, the patient dying within ten minutes of her seizure. Tracheotomy could not be performed, on account of the goître-like lump situated in front of the larynx and trachea. At the necropsy the lump was found to be the isthmus of the thyroid gland, hollowed out into a cavity containing recent blood-clot. The cause of death was evidently due to the effusion of blood into the cystic tumour, pressing either upon the trachea, or on the recurrent laryngeal nerves. W. J. Walsham.

3883. *Lefferts on Hæmorrhage after Tonsillotomy.*—Dr. Geo. M. Lefferts has found (*Archives of Laryngology*, vol. iii., No. 1) that, in a large percentage of cases of this operation, certainly a majority, no trouble is experienced, and that the bleeding ceases either spontaneously or by the use of a little ice. Those in which the hæmorrhage is troublesome, however, he divides into four classes; (1) a fatal hæmorrhage which is very rare; (2) a dangerous hæmorrhage, which may occasionally occur; (3) a serious one, serious both as regards possible immediate and remote results, which is not very unusual; and (4) a moderate one, requiring direct pressure or strong astringents to check it, which is commonly met with. Of class 1 the author has had no cases. Wound of the internal carotid artery, he remarks incidentally, has never thus far happened when the tonsillotome has been used. Of class 2, the author has met with two examples. In the first case, both tonsils were amputated with the tonsil-bistoury. The very free hæmorrhage which occurred was checked by the application of direct pressure. In the second case, one much hypertrophied tonsil was removed with Mackenzie's tonsillotome; and, the hæmorrhage which immediately followed not ceasing on the application of direct pressure, the anterior pillar of the fauces had to be drawn aside and a large artery which was spurting twisted with forceps. In both cases, in the author's opinion, the hæmorrhage came from the ascending pharyngeal artery. In the other classes, the author refers to bleeding from the venous plexus at the bottom of the tonsillar fossa; to hæmorrhage from the division of a small artery (which should be checked by pressure or by twisting of the artery with forceps), to venous hæmorrhage from the cut surface of a much enlarged tonsil; and, lastly, to wound of the anterior pillar of the fauces with the guillotine, giving rise to persistent bleeding from a small arterial branch. The last-mentioned accident is, the author considers, one of the commonest causes of *excessive* sore-throat after tonsillotomy. [We cannot but think that the author's unfavourable experience as regards hæmorrhage is due to his having removed the tonsils very freely, *i.e.* to a greater extent than we have found necessary. For he speaks of the 'operation of tonsillotomy, thoroughly performed' and of the tonsil being 'removed entire.' Removal of the projecting portion of the tumour is all that we have found necessary.—*Rep.*]

E. CRESSWELL BABER, M.B.

REVIEWS.

ARTICLE 3884.

Clinical Lectures. By RICHARD QUAIN, F.R.S. London: Smith, Elder, & Co. 1884.

IT is pleasant to see a work from the hands of so eminent a surgeon of past days, and we congratulate the author upon producing so handsome a volume of useful cases and lectures—a volume which must have been a labour of love to him in his retirement after an active and honourable career. It is not natural—it is not worthy of a man who has held a professional position, whose experience has been really large, and has been necessarily made use of in teaching—that the cessation of active work should be the cessation of work altogether. It is one of the great advantages of a scientific education and of years devoted to science, that the autumn of life is not one of stagnation; and we recognise that a surgeon or physician who has devoted his life to gaining experience has a duty to perform in not sinking this experience with himself. We are glad to see that some who have been Nestors in the profession recognise this duty; and in this volume we find among other things of value some cases which have been followed for years, and the result of treatment therefore given with more certainty and reliable accuracy than the usual records of cases and operations can possibly give.

A scientific worker may employ the leisure of his retirement in utilising the large store of experience he has necessarily accumulated, as is being done by Mr. Le Gros Clark in the *St. Thomas's Hospital Reports*; or he may review his professional life, and indicate the scientific advances made during this, and perhaps of the helping of which he may be proudly conscious, as we have lately seen in Dr. C. J. B. Williams's remarkably interesting account of the work of his own life. Others, like Mr. Cæsar Hawkins, have put together cases and papers which they would elaborate and to which they would find time to do justice; and this usually is an attempt to concentrate materials which had been scattered in stray periodicals, and which the author did not wish to be quite lost. Some few—but these must necessarily be few—formulate new ideas, and suggest to their younger brethren new fields of work, and bring their own ripe experience and still active minds to help in the direction of professional and scientific advances.

Mr. Quain has given us in this volume a number of valuable cases, and they are told in forcible and characteristic language—sometimes with a quaintness and purity of diction that is quite refreshing. If we carry ourselves back to the time when some of the lectures were written—about thirty years ago—we shall recognise the vigour of intellect and clearness of judgment shown by the surgeon, in many instances abreast of our own time. And we must acknowledge the thoroughness with which he has gone into every detail and bearing of his cases.

Perhaps some of the most valuable of these are those in which records are given of progress many years after the commencement of treatment.

In Case 5, there was atony of the bladder, for which the catheter was used, and the urine was very purulent and offensive. The catheter was passed once, twice, or three times a day, and yet, thirty years after this treatment was begun for the patient's relief, a report is given which shows the benefit obtained in his case. This testimony is valuable, when we consider the scare recently raised against the frequent use of this instrument. It shows what the careful and judicious use of it can do.

We are not surprised to find the author occupy fifty out of his 280 pages with diseases of the urinary organs, and some of his twenty cases are very valuable. Case 52 is an instructive one and beautifully illustrated, being one of pendulous tumour of the bladder, where the means advocated recently by Sir Henry Thompson would probably have been rewarded by the successful removal of the growth.

The plates are one feature of this handsome volume, over which the author has evidently spared no expense or pains to make it thorough. Nearly half the book is composed of plates, many of them being coloured and some of them double; but we are glad to find them incorporated in the volume, and not forming a separate atlas. They are well executed, and add materially to the value of the work. The printing, too, is excellent, and the perusal of the book is made really a luxury.

We heartily congratulate the author upon this addition to surgical and pathological literature, and are only inclined to take exception to the title, which does not do it justice.

ARTICLE 3885.

Clinical and Pathological Observations on Tumours of the Ovary, Fallopian Tube, and Broad Ligament. By ALBAN H. G. DORAN, F.R.C.S. London: Smith, Elder, & Co. 1884.

THE author, in his preface, tells us that the present work is the result of brief notes of every case coming under observation at the Samaritan Hospital during the last seven years, the number amounting to nearly 700.

He dwells at length upon pathological and clinical questions in relation to tumours of the uterine appendages, avoiding certain subjects which have repeatedly been discussed by surgeons who have had frequent opportunities of performing ovariotomy, such as statistics of mortality, the merits of the antiseptic system, the use of the drainage-tube, the weight of tumours, and the nature of their fluid contents.

The first chapter deals with the Origin of the Common Multilocular Ovarian Cyst. Mr. Doran gives his reasons for believing that these tumours most probably arise from Graafian follicles, that have undergone partial involution without ever having developed into corpora lutea. Under natural conditions such follicles undergo atrophy, but, under certain morbid influences, they develop into cysts.

These cysts rapidly involve the entire parenchyma of the ovary, growing away from the uterine appendages and seldom involving the broad ligament. They contain glairy fluid, and sometimes adenomatous growths spring from their inner walls. Ovarian cysts containing papillomatous growths spring from the hilum of the ovary, originating in relics of the Wolffian body. They do not rapidly involve the parenchyma, but tend to invade the layer of the broad ligament. Cysts arising from the vertical tubes of the parovarium, which is also a Wolffian relic, are also papillomatous.

What is generally described as a parovarian cyst certainly may and does, as a rule, arise, according to Mr. Doran, from the broad ligament itself, quite independently of the parovarium, though he has traced a cyst of this kind to the terminal dilatation of the horizontal or efferent tube of the parovarium, which is generally pedunculated, but sometimes sessile. A very frequent origin of the 'parovarian' tumour is the small thin-walled cyst often developed between the layers of the broad ligament, close to the ovarian fimbriæ of the Fallopian tube.

The author has seen the entire parovarium lying intact upon a so-called parovarian cyst. The hydatid of Morgagni, hanging from the fimbriæ of the Fallopian tube, never developes into a cyst of any magnitude.

The chapters devoted to the Origin of Ovarian, Parovarian, and Broad Ligament Cysts are clearly and abundantly illustrated, enabling the reader to follow readily the author's views.

Mr. Doran corroborates His's theory concerning the true position of the Fallopian tube, which accounts for its singular form when obstructed and dilated, and for the occasional position of an extra-uterine fœtus to the outer aspect and sometimes almost inferior to the ovary in undoubted cases of tubal pregnancy. Out of nearly 700 abdominal sections, where the author was present or examined the structures removed, only one proved to be a true tumour of the tube.

In reference to multilocular and glandular ovarian cysts, the reader will find much to interest him. When one cavity is so predominant that the tumour appears literally unilocular at operation, careful examination will seldom fail to show secondary cysts projecting under its inner lining membrane, generally towards the site of attachment of the pedicle. As a rule, the predominance of one cyst is a favourable sign, indicating the simplest form of tumour. When a solitary secondary cyst projecting from the inner side of the main wall bursts, its wall appears, some time after rupture, as a ring of fibrous tissue lying on the main wall, with a base consisting of its former lining membrane; this condition has been taken for ulceration. The possibility of the existence of papillomatous outgrowths within broad ligament cysts, the author considers to be a strong argument against attempting their cure by the process of tapping; as, should there be any papillary growths, it is very unsafe to leave them behind, as they may suddenly increase with great rapidity, and invade the peritoneum. Tapping is also not unfrequently very inefficacious.

Rupture of a simple cyst of the broad ligament is not rare, but, on account of the nature of the fluid contents, this accident very seldom produces severe peritoneal symptoms.

On account of the little tendency which these cysts possess to cause peritoneal irritation, adhesions are rare. The only troublesome complication that is frequent in operations on cysts of the broad ligament arises from the disposition of the capsule in some cases, where it burrows downwards so as to grow in the direction of the ovarian ligament, and beyond the limits of the broad ligament, and its removal becomes a matter of considerable difficulty.

All sessile cysts are troublesome to the operator; and, as they often contain papillomatous growths, unsatisfactory results often occur sooner or later after removal. They are, therefore, of great clinical as well as pathological importance.

Of twenty-four such cases submitted to operation, a very large majority were ordinary multilocular cysts that had pushed apart the layers of the broad ligament, and often burrowed under the pelvic or even the parietal peritoneum.

Dermoid Cysts of the Ovary are very frequent. The author regards the cause of their formation as closely and inseparably linked with some of the most profound mysteries of organic life. That they are not the outcome of so-called fœtal inclusions, is proved by the fact of their having occasionally been found to contain more than a hundred teeth.

The most interesting question with regard to dermoid cysts, and the most important clinically, as well as pathologically, is the occasional occurrence of malignant new growths within their cavities. Several cases have been observed where malignant deposits have recurred in the pelvis, two or three years after the removal of large dermoid cysts containing soft white growths that resembled sarcomata.

Solid Tumours of the Ovary, in the form of sarcoma or carcinoma, involve numerous questions of great clinical and pathological interest. Firstly comes diagnosis from pregnancy, and from fibroid or rather myomatous tumours of the uterus; then the justifiability of operation; then the clinical aspects of the relations of sarcoma of the ovary to cystic ovarian tumours that have become partly solid through intracystic glandular or papillary growths, and to solid or partially solid dermoid tumours. A sarcoma of the ovary, if left alone, is certain to cause secondary deposits and death, after months of great misery to the patient. When removed, it certainly does not tend to recur as rapidly as a sarcoma in other parts of the body. The malignant deposit not unfrequent within multilocular cysts is, as far as the author has observed, either true colloid cancer, or else what may vaguely be described as adeno-sarcoma, it being hard to distinguish how far the glandular or the sarcomatous elements prevail.

Rupture of Ovarian Cysts is an important complication, considered both from its clinical and its surgical aspects. It is, as a rule, a mere leakage, producing but a slight amount of discomfort, and very trifling symptoms of peritoneal irritation. On the other hand, a clear history of rupture, with no subsequent acute symptoms, may be followed by ascites, cachexia, and other signs of a disseminated new growth in the abdomen.

Lastly, there may be the true acute rupture of an ovarian cyst, followed by fatal hæmorrhage or peritonitis. Cysts containing papillomatous growths are particularly liable to rupture. These growths are very liable to infect the whole peritoneal cavity, exhibiting the most malignant tendencies. The pathological formation of a rupture by changes in the main cyst-wall occurs through certain inflammatory and degenerative changes in the wall, and also from the pressure of secondary cysts developed more or less within the substance of the main wall.

The chapter on Morbid Conditions of the Kidney associated with Ovarian Tumours is one of much practical interest. It embodies the records of thirty-three *post mortem* examinations on the bodies of patients who died, either after ovariotomy, or with large ovarian tumours in the abdomen. The clinical evidence is strong, that in the majority of these cases the disease was due to the presence of a tumour; the dilatation of the ureters immediately above the brim of the pelvis, where the pressure would be most direct, being very frequent. The author regards the diseased condition of the kidneys as the chief cause of death in fatal cases of ovariotomy. Diffuse interstitial nephritis is very frequent in conjunction with ovarian disease.

Having thus attempted to indicate the nature of the work under consideration, it remains only for us to congratulate Mr. Doran upon having contributed to medical literature such a valuable series of observations upon the pathology of ovarian and other tumours. The work will serve to advance materially our knowledge upon the subject, and we feel sure the profession will feel indebted to Mr. Doran for thus having utilised the resources at his command for their benefit. ARTHUR W. EDIS, M.D.

ARTICLE 3886.

*The Lunacy Law: its Defects, and a Scheme of Reform.** By WILLIAM R. HUGGARD, M.A., M.D., M.R.C.P.Lond.

DR. HUGGARD would reform the lunacy laws by putting their administration into the hands of scientific experts. After enumerating the various methods available in England for certifying lunatics, he observes :—

'The important point in which they all agree is that not one of all the persons engaged in certifying insanity is required to have any acquaintance, practical or theoretical, with insanity. The medical men, the Master in Lunacy (at any rate till he have acquired some experience), and the jury, may all—in their respective cases where their services are required—be absolutely incompetent to determine the precise nature of the individual case on the one hand, and may be absolutely ignorant of the nature of insanity generally on the other hand. Not one of them may be able to discriminate between the forms of mental defect that jeopardise the peace and security of society and those forms of mental defect that neither annoy others nor endanger the person himself. On the one hand, melancholia, though fraught with danger, may be regarded as a mild ailment, not requiring vigilant supervision; on the other hand, a harmless though absurd belief may be looked on as a dangerous insanity. This result is not to be wondered at: a person can hardly fail to do badly what he does not know how to do well. . . . Medical men and others (he goes on), who do not happen to have any very clear idea of insanity, are apt either to diagnose it on very insufficient grounds, or to fail to see it in spite of the most palpable evidence. Any asylum superintendent could furnish examples of both kinds.'

One cannot, of course, expect an ordinary medical practitioner to have a consummate knowledge of insanity; but we think that medical men generally perform their duties in certifying lunatics in a satisfactory way. They are not necessarily expected to treat a case of insanity, but to give a certificate that it should be sent to an asylum where the patient may be so treated. Although their certificates are sometimes badly or awkwardly worded, it is very rare that they send men to asylums who are not insane; and if they do commit an error, it is always in good faith.

As regards licensed houses, which have been so much decried of late, Dr. Huggard thinks that the law is not perfect. He defines a perfect law as one which 'gives a complete expression to recognised principles.' 'The proprietor of a private asylum (he writes) is entrusted with an anomalous combination of adverse functions. He is at once landlord and discretionary custodian, paid host and gaoler-at-will. By discretionary custodian and gaoler-at-will, I mean not a gaoler to whom a prisoner is committed for safe custody during a certain period, but a gaoler who is himself charged with the duty of determining how long the prisoner should stay.' It is not that he thinks proprietors of asylums worse than other men, but that all men should be delivered from temptation. 'That prejudice biases the decisions of the mind, is a failing of our common humanity. The wisest and best of men have at times formed their opinions in the coloured light of emotion rather than in the dry light of intellect. Self-interest warps the judgment as powerfully as does any other emotion, and it is never well to unite duties so antagonistic that a more than average mental endowment is required—not for the honest, but for the impartial performance of them.'

To remedy this faulty state of things, Dr. Huggard proposes to deprive the medical profession of all right to certify cases of alleged insanity, except in cases of emergency; and that this should be done by competent Government officials, medical examiners in lunacy, who should have a fixed salary. He thinks that sixteen men would probably be enough to discharge this duty throughout England.

Dr. Huggard would not abolish private asylums. He proposes that 'the proprietor of an asylum should be entrusted simply with providing for the safety and for the well-being of the patients; and the State should undertake in a much more immediate manner than at present the discretion of continued detention. The immediate responsibility for a patient's detention should rest with a Government official, or medical visitor in lunacy. Almost all the duties, in fact, that now fall on the proprietor or superintendent of a private asylum, in virtue of his office as discretionary custodian, should be transferred to the medical visitor: such, for example, as the duty of reporting (or supervising the reporting) of the mental and bodily health of the patients at weekly, monthly, or quarterly intervals, according to the nature of the case; and it should be in his power, subject to the control of the Commissioners, to authorise a discharge or a transfer should he think fit.'

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* Reprinted for the Author from the *British Medical Journal*, January 17, 1885.

It would appear that Dr. Huggard's main objection to the lunacy laws, as they bear upon licensed houses, is that he conceives that these laws are founded on incorrect general principles. He observes—'This anomalous combination of duties is, as a rule, I believe, carried out in a way that does the highest credit to proprietors of private asylums. The system is, however, not the less objectionable on that account.'

But *à priori* legislation, based upon philosophical principles, has never been much held in esteem by the builders of our constitution and the framers of our laws. It is, indeed, distinctive of the English people that, if they find an arrangement to work well, they are not ready to abandon it for a new proposal believed to be founded on more correct principles. It would be tedious to examine on what principle private asylums have been founded, but we may assume that they are founded on some, since they exist in most civilised countries as well as in our own, and they are appearing in the colonies. It may also be noticed that private hospitals and establishments for the care of the sick are becoming more and more common. Through the existence of private asylums, the public gains the advantage of much professional skill and a large amount of capital; and if they were abolished to-morrow, the State would need to step in to use money raised by taxation drawn from every class, from the very poorest, for the benefit of the rich, many of whom would object to any public interference with the care of their insane relatives. Dr. Huggard says nothing about an inquiry made a few years ago by a Committee of the House of Commons into cases of alleged wrongous detention, in which not a single case was substantiated; nor does he say that he knows any such cases. If he do, or if he ground his views upon the existence of such cases, he ought to state plainly their nature and amount. If it be a correct principle to assume that man is a creature easily biased by notions of self-interest, and that no perfect law will grant him an opportunity of yielding to this bias, it may also be safely assumed that men are prone to abuse power, and that the only way to keep them from doing so is to entrust them with as little as need be, and to hold them responsible for what they do. The right or duty of testifying whether persons are insane is given to the members of the medical profession, because they are the most likely men to be acquainted with insanity, are frequently called upon to treat it as a disease, and, from the nature of their calling, are diffused over the whole kingdom. If they make a mistake, or if twelve jurymen, ignorant of the subject, fancy they have made a mistake, and choose to attribute it to base motives, they are liable to an enormous fine, and to consequent loss of reputation and income. For this defenceless and easily baited class of men, Dr. Huggard would substitute sixteen stipendiary experts, who should severally have the privilege of imprisoning any man for insanity, and who would, we may assume, be protected by special enactment against any action brought for what they had done in the execution of their duty. We do not think that this would reassure the public, and we are quite sure that the accusations and suspicions brought against medical men would be promptly transferred to this new Star-chamber of lunacy. It would be too much to expect that those who accuse the physicians of private asylums of the guilt of detaining persons who were never insane, would shrink from accusing some of the medical examiners of taking a direct bribe from the relatives of a wealthy lunatic. As Dr. Huggard remarks, 'No matter how perfect our lunacy law may be, it will never give satisfaction so long as there are lunatics who think themselves sane.' Moreover, many of these have never been in asylums. As it is, the metropolitan private asylums are inspected six times a year, the others eight times; nor is there any reason for thinking that this inspection is insufficient to ensure that no cases of illegal detention take place. It is clear that in many cases the inspectors must rely upon the superintendents of asylums, whether public or private, as to the conduct or degree of recovery of the detained lunatics; and it is difficult to see how it would be otherwise unless they permanently reside in the building, or at least make almost daily visits; but Dr. Huggard thinks that this duty could be discharged by twenty medical inspectors. He observes that public distrust has a strong tendency to drive the best men from the work and to leave it in the hands of less suitable persons. We must, therefore, be prepared for more of the best men being driven away should distrust be organised with the form of diminished discretionary powers and increased inspection degenerating into espionage. In fact, it may be well doubted whether anyone would risk capital under such unsafe conditions.

Some proprietors of asylums, wearied with abuse and suspicions, are quite willing that their establishments should be abolished by the Legislature, under the impression that full compensation will be voted. Dr. Huggard calculates the annual income of private asylums in England as worth 450,000*l.* The amount of compensation ought thus to be very considerable, but no one need be too sure that he will get any more compensation than the Irish landowners got. It would be easy to frame a Bill to squeeze them to death under the guise of subjecting them to proper surveillance.

While disagreeing with Dr. Huggard on these points, we would add our high opinion of his knowledge and ability. He has done himself one injustice in not making his pamphlet longer. Instead of six pages, he would have needed twenty to have fairly stated his views and brought out his arguments to support them. W. W. IRELAND, M.D.

ARTICLE 3887.

Insanity and Allied Neuroses: Practical and Clinical. By GEORGE H. SAVAGE, M.D., M.R.C.P., Physician and Superintendent of Bethlem Hospital; Lecturer on Mental Diseases at Guy's Hospital; Joint Editor of the *Journal of Mental Science.* With nineteen illustrations. London: Cassell & Co. 1884.

THERE has been a great number of text-books on insanity recently published in England and America, not to mention France and Germany; but a glut in the market never injures the consumers. We need not, therefore, hesitate to give Dr. Savage's book a cordial welcome, especially as it is one likely to make its way in the world. The style is clear and flowing, the arrangement good, the details well chosen, and the advice he gives sensible and useful. Though Dr. Savage thinks for himself on most points, he is no doctrinaire. He has no peculiar views looking out for confirmation, and he seems singularly free from a belief in the importance of trifles, one of the besetting weaknesses of medical superintendents of asylums, which perhaps is not their own fault.

The book, which contains 544 pages, is one of a series of pocket manuals, promised by Messrs. Cassell & Co., on special subjects connected with medicine and surgery. Dr. Savage's woodcuts are the best we have seen in any book on insanity. They illustrate the facial expression in different forms of mental derangement. We suppose they are taken from instantaneous photographs. Many of his cases are very striking, and sometimes the patient is made to describe his own experience in a manner which adds interest to the volume. At the end there is a good and copious index.

In a work of this kind we cannot expect any novel views on pathology or treatment, and it would be out of the way to look out for such in order to criticise them. Perhaps our best way of showing the value of the book is to present the reader with a few extracts. 'It often strikes an observer,' says Dr. Savage, 'that among chronically insane patients there does seem to be a development of a special type of feature, and that this type is distinctly a low one. Just as it is rare in an idiot asylum to see a beautiful and well-formed child (though not an impossibility), so in a lunatic asylum I would say it is seldom one meets with striking physical beauty. The transmission of insanity, as I said before, tends gradually to the abasement and ultimate extinction of the race. Degeneracy in nature is naturally in opposition to beauty and well-being.' We should like to hear more of Dr. Savage's views on the transmission of insanity causing the extinction of the family. This may be a desirable consummation, but, as far as our observations go, neurotic families are often prolific, and do not tend to die out. The following remark is curious. 'It is strange, in reference to this last point, that suicidal patients should have favourite methods of putting an end to their lives, and that they will even incur danger in order to accomplish their end. In this way I have known a patient, extremely well-behaved while at our convalescent home, who appeared to have forgotten all about his desire to kill himself until he was discharged, when, avoiding river and railway, he blew his brains out with a revolver, having first attempted to kill himself in this manner before his admission into the hospital. It is narrated also that a patient escaped from an asylum and swam a river, and then threw himself under a railway train. The monotony of their thoughts thus persists, and shows itself even in attempts at self-destruction.'

In his chapter on the Causes of Insanity, Dr. Savage gives his views on over-pressure. 'In my opinion, true education, that is, the true development of mind and body, is the best preventive of insanity. Over-education or bad education consists really in the development of one side of the human being at the expense or to the neglect of the rest; and the fault which one constantly sees, is in educating the child along the lines to which its tastes lead it, without paying sufficient attention to correlated functions.' . . . 'The education which I have seen do most harm is that which may be called education out of harmony with the surroundings of the individual. Thus, the promising artisan who wins some prize, or who is taken up by some well-meaning patron, and who is educated in the book-learning of the ancients, or in the science of the moderns, runs danger of suffering. I have constant examples in Bethlem of young men, who, having left the plough for the desk, have found, after years of struggle, that their path was barred by social or other hindrances, and disappointment, worry, and the solitude of a great city have produced insanity of an incurable type.' We doubt that these views will be well received north of the Tweed, where, at present, there is a powerful *nisus* to grasp at all money within reach, whether through gifts, bequests, or fleecing old charitable institutions, in order to multiply bursaries or scholarships, a species of bounty to tempt diligent pupils in elementary schools to enter the Universities. They are generally given by competition, handsome honoraria being assigned to the examiners. If it were thought desirable to slacken the multiplication of bursaries, it would probably be sufficient to give the professors consolidated salaries. It is difficult to do good without also doing evil. In the same way, Dr. Savage's experience leads him 'to fear that every new hypnotic does at least as much harm as good.'

Dr. Savage's remarks on the Treatment of Insanity are more judicious than sanguine. He thinks that an attack of insanity, in the majority of cases, leaves the patient more or less mentally crippled.

The work concludes wlth two chapters on the Legal Relations of Lunacy. He gives his views on private and public asylums, and the family care of the insane, showing a commendable fairness of judgment.

Altogether, the book, within its limits, is of a comprehensive and useful character, and will increase Dr. Savage's reputation for knowledge and ability.

W. W. Ireland, M.D.

Article 3888.

Contributions to the Topographical and Sectional Anatomy of the Female Pelvis. By D. Berry Hart, M.D., F.R.C.P.E., Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh. Edinburgh and London: W. & A. K. Johnston. 1885.

Dr. Hart's new work consists of an atlas and a few pages of explanatory text: the former including a series of illustrations of high scientific value and of true artistic merit, whilst the latter is devoted to the discussion of certain subjects which the illustrations have been designed to elucidate. The author having already established his reputation as an authority in such questions as appertain to pelvic anatomy, a critical survey of his new work is needless, it being only necessary to observe that in it he maintains his former reputation. On the other hand, a brief review of the author's opinions as expressed in the text and illustrated in the plates will be necessary, in order to give our readers a fair idea of the entire publication. The frozen sections which are delineated in this atlas suggest, according to Dr. Hart, some special and novel observations with regard to the position of the uterus and its append-one-fourth were affections of the alimentary canal. Next came those of the respiratory organs, especially catarrh; these were frequent among natives. Tuberculosis was not uncommon, and in some cases seems to have been communicated. Infectious diseases furnished one-seventh; and the number of cutaneous affections was large, as they are exceedingly common among Indians. Syphilis was frequent, while gonorrhœa was much less so. Scrofula was common, and he saw a case or two of lupus. Acute articular rheumatism and heart-affections also occurred. There were epidemics of dysentery, of German measles, of spotted typhus, and of typhoid, also of small-pox and whooping-cough. A few cases of measles and of scarlatina occurred; but Dr. Martin never saw either diphtheria or puerperal fever. He never saw abscess of the liver in cases of dysentery, which had been contracted in his district, though they occurred in patients who had come from the warmer parts of Chili with the disease. Neither cholera nor yellow fever have reached Chiloe. Dr. Martin had no cases of intermittent fever, the climate, as he thinks, being too cold for it; but it is noteworthy that he met in a swampy locality with two cases of greatly enlarged spleen in young children, and also with a case of ulcerating cheek, or noma, two of the phenomena common in malarious districts.

Our author proceeds to compare the diseases of Chiloe with those of other countries having similar climates. As regards moisture, the west of Europe is comparable, to a certain degree; namely, Portugal, Great Britain, Ireland, and Norway. On the whole, he thinks the conditions of Ireland most similar, both as to climate and as to state of civilisation, and as to the diet of the people, although he believes the Irish to be far behind the people of Chiloe in education. Dysentery, typhus, and catarrh of the respiratory organs have been common in Ireland, as in Chiloe.

Dr. Martin then proceeds to consider some more general questions about the causation of disease. Dysentery and intermittent are associated in North Germany, as in the tropics. Some writers of late have considered malarious fevers, dysentery, and liver-abscess as a triad, characteristic of the tropics. But in Chili there is dysentery spread all over the whole republic; liver-abscess runs into the south temperate zone. Yet malarious fever is scarcely known in Chili, and then under very exceptional circumstances. He goes on to show that there is a singular absence of intermittent fever in the southern part of the Argentine Republic as well as of Chili, including Chiloe, while dysentery is common; and, looking at other places in the southern hemisphere, he finds that this is also the case in Australia, in New Zealand, and in Polynesia, all of which suffer from dysentery, but have no intermittent fever.

He says, in conclusion, that in any case we cannot help being struck with the frequency and wide extent of dysentery in the southern temperate zone, and with the insignificance of malarious influences there, as contrasted with the ravages of that disease in the valley of the Mississippi, in southern Europe, and even in the swampy parts of France and of Germany. He might almost assume that dysentery is as characteristic of the temperate zone of the southern, as intermittent is of that of the northern hemisphere. For, while according to Hirsch, intermittent reaches in North America beyond 46° and in Sweden even to 62° of latitude, it has never been observed in the southern hemisphere beyond 42°, and in Chili at present never occurs beyond 32°.

Dr. Martin thinks that damp and heat must concur to produce malaria, and attributes the absence of it in many places, where it might naturally be expected, to the non-concurrence of those two factors. In Chiloe the heat is insufficient.

It is, perhaps, worth mentioning that ipecacuanha was scarcely ever used in the treatment of dysentery by our author; and that he found Simaruba, the popular native remedy, effectual in some cases. It is a curious fact that the Chilians and Indians of the south have, like the natives of Brazil, a great aversion to the use of milk, as being an animal secretion. JOHN MACPHERSON, M.D.

ARTICLE 3891.

The Ear, its Anatomy, Physiology, and Diseases. A Practical Treatise for the Use of Medical Students and Practitioners. By CHAS. H. BURNETT, A.M., M.D. Second Edition. London: J. & A. Churchill. 1884.

TO see 'Burnett on the Ear' in a second edition is like meeting an old friend in a new dress. The first edition of this standard treatise is so well known, that we need only refer to the alterations found in the present volume.

Several chapters, the author tells us, have been re-written, but the most important changes strike us as occurring in the treatment of chronic otorrhœa (with perforation of the membrana tympani), in the article on aural polypi, and in that on auditory vertigo. Insufflations of powdered boracic acid, for treating chronic suppuration of the middle ear, have a strong advocate in Dr. Burnett. Other powders recommended for this purpose by the author are borax, 'calendulated boracic acid,' resorcin with boracic acid (ʒj. of the former to ℥j. of the latter) and a mixture of chinoline salicylate (1 part) and boracic acid (16 parts). In the section on aural polypi we find that the author has adopted a new classification as follows; 1. Granulation tumours; 2. soft papillomata; 3. fibromata; and 4. myxomata. Of the former two, which constitute by far the larger majority of growths met with, the author gives two cuts from micro-photographs, showing their histological characters.

In the chapter on vertigo, the author discusses *seriatim* that arising from affection of the external, middle, and internal ear. As he has rarely seen internal ear-vertigo without conclusive evidence of a previous chronic catarrhal disease, he concludes that this form of vertigo is usually preceded by pathological changes in the circulation of the middle ear, which induce changes in the circulation of the internal ear, culminating in a sudden and grand attack. He limits the term Menière's disease 'to internal ear-vertigo.' On the difficult question of diagnosis between vertigo due to tumour pressing upon the auditory nerve, and that produced by disease of the internal and middle ear, the author points out that in the former case the interference with equilibrium is slow in its onset, gradually increasing and always permanent to the end. The gait is permanently altered, and the tendency is to fall towards the affected side. For the immediate relief of the tinnitus in internal ear-vertigo—in fact, for the treatment of tinnitus generally—the author has found no internal remedy to equal bromide of potassium.

Amongst the new illustrations we notice one of Sexton's flexible India-rubber Eustachian catheter. It is firm enough to be used without a stylet, and may be larger in diameter than those usually employed, as, on meeting with an obstruction, it collapses. Dr. Burnett has found it of great value in cases of deviations of the septum, and in hypertrophy of the turbinated bones. Its beak has the ordinary curve of an Eustachian catheter. Into its proximal end is fitted a vulcanite cannula, provided with a knob to indicate the direction of the beak. The matter added in this edition will fully sustain the reputation of the book.

E. CRESSWELL BABER, M.B.

ARTICLE 3892.

Handbuch für Madeira. Von Professor Dr. PAUL LANGERHAUS. Crown 8vo., pp. 200. Berlin: A. Hirschwald. 1885.

DR. LANGERHAUS'S work, which is intended for the Germans, must be considered now to be the fullest book we have on Madeira. It supplies ample information on every subject. Dr. Langerhaus explains that his book is essentially founded on *White's Handbook*, or rather on the greatly enlarged edition of it, published by Dr. T. J. Johnson in 1857. That gentleman has lent his friendly assistance to the present work, and the result is eminently satisfactory. There have been so many monographs on Madeira of late years, several of which have received notices in the LONDON MEDICAL RECORD, that there is not much in the way of novelty to be said. But our readers may be interested in the following summary of the usual course of the season and its climatic characteristics in Madeira, and also in what is said of the classes of phthisical patients that are most likely to benefit by a resort to that beautiful island.

As regards humidity, Madeira is to be classed as moister than the Riviera, but less so than Corsica or Palermo. The most important attribute of the climate of Madeira is its uniformity, and in this respect Madeira differs from all other health-resorts. It is not a winter-cure station, which has to be left regularly every spring, and returned to every autumn. A patient can remain on through the whole year.

The following is the general course of the seasons. After the beautiful rainless summer, the first harvest rains set in in September, while, on days when it does not rain, the sky is clear and fine. After the first rain, several weeks of fine clear weather usually follow. Towards the end of October heavy showers ordinarily come from the south and the south-west, and November has much wet, which extends into December. Along with this, the temperature has very gradually fallen about 4° or 5°; and it happens occasionally, that a storm from the north-west covers the mountains with snow for several days, as in the year 1833, when the three preceding years were almost entirely free of rain. The beginning of January is often fine and clear. In the end of January or in the beginning of February, the winter rains begin, and snow falls on the mountains in February and in March almost every year. The weather in March is unsettled, rain alternating with cloudy weather. In April, the weather is usually fine and clear. It becomes gradually warmer. From the middle of May till near the middle of July it rains very seldom, but the sky is almost constantly clouded. Newly arrived persons are expecting rain every moment, while in reality the layer of clouds only acts like a parasol, and keeps down the temperature to a moderate warmth. It is not until the beginning or the middle of July that the sky clears; it then becomes very warm in the town, and people leave it, to go to the hills. The summer months till the middle of September are uniformly fine and rainless.

The variations in the course of the season depend on the greater or smaller number of rainy days, and occur chiefly in November, December, and January, which one year are drier and another more rainy.

We next give the substance of what is said of the class of cases best suited for a residence in Madeira.

On the whole, it might be expected that the climate would be best adapted for those whom the very different mountain-climate, of which Davos is the type, does not suit. And, as a matter of fact, observation appears to be gradually showing, that those two sorts of phthisical patients do best in Madeira that do worst at Davos; namely, those in whom there is a great disposition to hæmorrhage, *i.e.* erethic patients, and those in whom the disease is, or appears at first, confined to the larynx. Every one who has watched such cases in Madeira has seen excellent results follow a lengthened visit to the island. Young people with disposition to phthisis are not often sent to Madeira; but they usually do well there, as, indeed, they are believed to do in the high Alps.

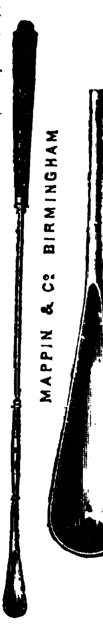
J. MACPHERSON, M.D.

NEW INVENTIONS.

ARTICLE 3893.

A NEW UTERINE SCOOP.

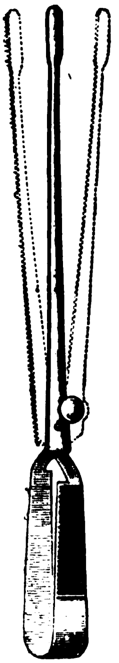
MR. HEADLEY NEALE, the inventor of the new uterine scoop figured below, claims but little originality of design for it. He describes it as merely a spoon (larger and somewhat more incurved than that of an ordinary director), taking the place of the distal two-and-a-half inches of Professor Simpson's uterine sound; and, like it, having its stem graduated up to four-and-a-half inches. The spoon-end is of virgin silver, to allow its being bent to any required angle, while the stem is nickel-plated; and the side of the handle looking towards the convexity of the scoop is roughened, to indicate to the operator, when the instrument is *in utero*, the direction of the edges, which are adapted for scraping the uterine walls. The possible objection that the width of the spoon may render dilatation of the os and cervix uteri necessary prior to the passage of the instrument, is met by the fact that the rounded end and incurved edges allow its being used with safety as a dilator *per se*; and that, in such conditions as would call for its use, these parts will be found sufficiently patulous to allow its easy passage. It is designed to be of service in cases of incomplete abortion, of retained and



adherent fragments of placenta, but more especially in endometritis fungacea. The author has himself used the instrument with satisfactory results; and, from the reception it has already met with at the hands of certain distinguished members of the profession, he is encouraged in the hope that it may prove a serviceable addition to the armamentarium of the obstetrician and gynæcologist. The scoop was exhibited at the meeting of the Midland Medical Society on Dec. 3, 1884. The makers are Messrs. Mappin & Co., 121 New Street, Birmingham.

ARTICLE 3894.

A NEW SPECULUM FORCEPS.



DR. ALEXANDER DUKE, Obstetric Physician to Dr. Steevens's Hospital, Dublin, having experienced considerable difficulty in removing from the grasp of the old form of speculum forceps the wadding used in mopping the os and cervix in cases of endometritis, cervicitis, &c., was led to design the instrument, of which the accompanying woodcut gives a faithful representation.

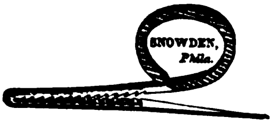
The instrument is a cross action, has a smooth bite, and the pressure of the thumb and fingers on the sides of the handle is sufficient to open the blades; the wadding can then be grasped by releasing pressure. When it has been used, the wadding is easily disengaged by a similar pressure on the sides of the handles, or, if necessary, a brisk jerk as well. The more the wadding becomes saturated with discharge, the easier it is to shake it off. This shows a marked difference from the old form of speculum forceps, where the serrated surface of the points held the saturated wadding most firmly.

Dr. Duke states that it is now some years since he had his forceps made, and having since used the instrument almost daily, he can testify to its value, if only as a saver of time, a consideration in dispensary work. The dotted lines in the woodcut represent the instrument as opened (as pressed on at the sides of the handle), ready to grasp the wadding on release of pressure. The makers are Messrs. Fannin and Co., and D. E. Corcoran, Dublin.

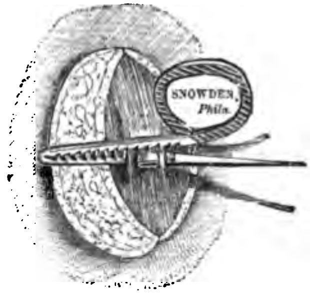
ARTICLE 3895.

AN ARTERY-COMPRESSOR.

A CONVENIENT and effective appliance has been devised by Dr. Levis, of Philadelphia, for the rapid arrest of hæmorrhage in large open wounds. Numbers of the compressors can be quickly applied during an operation, and the surgeon may leisurely ligate the vessels if, after their removal, the ligature should be required. In many operations, attended for the time by great hæmorrhage from numerous small vessels, the temporary stasis produced by the compressors will be sufficient to prevent further flow.



By this device, the operator can proceed to the end of an operation without stopping to apply ligatures.



The instrument and its application are so illustrated in the cuts that description is unnecessary.

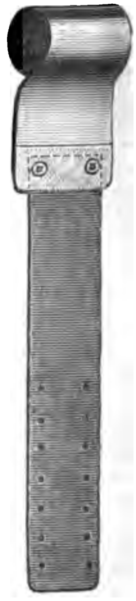
The compressors are made by Snowden, 7 South Eleventh Street, Philadelphia, U.S.A.

ARTICLE 3896.

IMPROVED FASTENING FOR ELASTIC BANDAGES.

MR. MAHOMED, of Bournemouth, is of opinion that all who have used Martin's bandages must have experienced considerable inconvenience from the method of fastening generally adopted, consisting of tapes sewn on to the webbing, which simply pass round the leg and tie. Not only, he thinks, is this insufficient to keep the bandage properly in position—the two or three turns below the top generally becoming loose, and hanging down—but it induces the very state of things the surgeon is trying to remedy. That is, it fixes the saphena vein against the head of the tibia, and compresses it by an inelastic ligature, thereby causing venous congestion of the leg and foot.

It is evident to Mr. Mahomed that the essential of a proper fastening is that it should be elastic. Messrs. Statham & Co, of Corporation Street, Manchester, have, therefore, at Mr. Mahomed's suggestion, adopted a very simple plan, which seems to obviate all disadvantages. This is merely to fasten two shirt-buttons on the webbed end, and to supply with each bandage a piece of fine red rubber, about fifteen inches long, with a double row of holes punched out at each extremity. One end is fastened over the shirt-buttons, and may remain so permanently (when the circumference of the leg is gauged, &c.); the other, in fastening, passes round the leg, and is brought over the buttons again.



This little expedient adds greatly to the comfort of those who are obliged to wear bandages continually for varicose veins, for which purpose they are greatly superior to stockings; for, though they may, while new, fit very well, the stockings are generally continued in use until their value as supports is little better than that of ordinary cotton ones;

and frequently they are worn until an extra piece of elastic cord, sewn in at the top, to 'keep the stocking up,' is necessary, which brings their remedial value down to a *minus* quantity. The bandages have also this additional advantage, that the pressure can be nicely graduated from below upwards.

ARTICLE 3897.

'SILICATE COTTON' OR 'SLAG WOOL.'

WE have recently had an opportunity of examining specimens of 'silicate cotton' or 'slag wool.' It is manufactured from blast-furnace slag, and is quite incombustible. It is used for a variety of purposes, such, for example, as rendering houses fireproof, deadening sound, covering hot-water pipes, &c.; but its most recent application is as a surgical dressing and as a lining for splints. It is beautifully soft, and is so absorbent that it quickly soaks up all discharges. It is not only inexpensive, but the same dressing may be used over and over again. All that is necessary is to put it in a bright fire until organic matter is destroyed, and it is then as good as new. It is ingenious, and deserves a trial. The manufacturers are Messrs. Jones & Co., of Perren Street, Ryland Road, N.W.

ARTICLE 3898.

HARTMANN'S HYGIENIC WOOD-WOOL DIAPERS.

WE have received from Messrs. Essinger & Neuburger, of 11 Hatton Garden, E.C., specimens of Hartmann's Hygienic Wood-Wool Diapers. We find that they are composed of wood-wool impregnated with corrosive sublimate, which acts as an antiseptic. Their absorbing power is by far greater than that of the common absorbent cotton-wool pads. There can be no doubt that they are a great improvement over the old-fashioned diaper, which will in time, we trust, be entirely discarded. They are economical, as washing is dispensed with, and are a great convenience in every way. They are light, and even when in use remain soft and flexible. For ladies travelling they are simply indispensable, and we can recommend them with confidence.

ARTICLE 3899.

COMPRESSED TABLETS.

MESSRS. BURROUGHS, WELLCOME, & CO. have sent us specimens of compressed tablets made with their new and improved machinery. They are of various kinds, and the list, which is a long one, includes nearly all the drugs of the inorganic materia medica in common use as medicinal agents. The 'soda-mint' tablets, containing carbonate of ammonia, bicarbonate of soda, and a small quantity of oil of peppermint, are invaluable in the treatment of acidity, flatulence, and, in fact, most kinds of dyspepsia. They can be so conveniently carried in the pocket, and are so prompt in action, that we are not surprised to find that they are universally prescribed. The salicylate of soda tablets are admirably adapted for travellers and others subject to attacks of acute or subacute rheumatism. We are glad to see that the bromide and iodide of sodium have been put up in this form, for the use of sodium compounds in place of the corresponding potassium salts is becoming every day more and more general. The tablets of chlorate of sodium and borax will be found useful in many throat affections. An attempt has of late been made to decry the use of tablets of permanganate of potash, but we are satisfied that they constitute by far the best remedy for amenorrhœa, and that they can be taken with perfect safety, if only they be given after meals and with a little water. The possession of one of Messrs. Burroughs & Wellcome's pocket-cases, containing ten or a dozen tubes of compressed tablets, would lead to a great saving of time and trouble in country practice, for a quantity sufficient to treat fifty or sixty patients could be carried without difficulty. We have had considerable experience of the compressed tablets, and think very highly of them.

DIETETIC NOVELTIES.

ARTICLE 3900.

THE LONDON MANUFACTURING COMPANY'S MEAT PREPARATIONS.

THE meat extracts and preparations made by the London Manufacturing Company are of a very elegant and high-class character, and are a distinct and great advance upon anything of the kind previously brought out in London. The *Essence of Beef*, made from pure meat juice, without any addition of water, gelatine, or any other extraneous substances, equals in transparency and clearness the finest glycerine jelly of microscopists, possesses the most delicate and pronounced meat-flavour, and contains all the most stimulative constituents of meat. It is a beautiful preparation to look at, elegantly put up, and practically the ideal of a meat essence. It is free from the semi-excrementitious flavour of extractum carnis, and is to be recommended alike to the invalid in want of stimulant, and to the worker whose energies are too valuable for mere digestive work.

The *Concentrated Beef Tea* is made from the best portion of beef—the fore-quarter—all gelatinous and sinewy tissue being carefully rejected in the process of manufacture. It is, therefore, rich in extractive matters, potash salts and phosphates, and possesses, when duly diluted with hot water and seasoned, a flavour indistinguishable from that of good home-made beef-tea. It has a dark yellow colour, not the brown tint reminding the consumer of glue and the decoction of bone not unfrequently passed off as 'beef-tea.'

The London Manufacturing Company also prepare an *invalid turtle soup* worthy of an aldermanic table—a really first-class article.

Personal inspection of their manufacturing premises (59 Hatton Garden, E.C.) by the writer, has convinced him that all processes are conducted in the most scientific manner, with the greatest cleanliness, and with due regard to the many precautions which are necessary for the production of articles which are intended to be perfect. The mode of preservation, the ingenious method of hermetically closing the bottles by means of successive layers of cork, &c., is much to be commended.

All preparations of the London Manufacturing Company bear the 'LION BRAND' trade mark.

ARTICLE 3901.

DR. KOCHS' MEAT PEPTONE.

A SUPERFICIAL observer would declare this preparation to be ordinary extract of meat, so nearly does it possess the colour, consistency, odour, and flavour of that article, even to the peculiar admixture of crystalline meat constituents noticeable in Liebig's Extract. It is free from the bitterness and somewhat excrementitious odour which has been characteristic of some of the earlier peptone preparations. Chemical examination, however, shows most unmistakably the presence of a large proportion of digested—peptonised—albuminous matters. The article is so well made that both to the invalid and to persons of weak digestion it will prove welcome. It is stated, in its favour, that Dr. Binz (of Bonn) has, upon the basis of feeding experiments made on animals, proved that the use of Dr. Kochs' Meat Peptone as food does not only prevent the diminution of albumen in the organism, but that the peptonised albumen it contains is readily assimilated, and that as much as 150 gr. can be taken per diem without any injurious effect. These Meat Peptones are prepared by the *Compagnie Peptones de Viande du Docteur Kochs*, of Antwerp, the sole consignees for United Kingdom and Colonies being Messrs. Widenmann, Broicher, & Co., 33 Lime Street, E.C.

MISCELLANY.

NEW AND SAFE DISINFECTANTS.—Experiments by Señor Olavide, in the laboratory of the Hospital of San Juan di Dios, with colouring matters and their action on bacteria, give the following results, which show that such matters not only may be useful for disinfection in general, but in the treatment of infectious diseases, wounds, and ulcers also. 1. Aniline colours in watery or alcoholic solution of 4 per 100 kill first and then dye all bacteria, except that of croup. The aniline violets and blues are more rapid in action than the acid (methylene) reds and blues, and more active than the basic (methyl). 2. Of colouring matters soluble in water and alcohol, not aniline, solutions of 4 per 100 of azafranine (the colouring matter of saffron), brasiline (the colouring matter of Brazilian wood), and hæmatoxylin (the colouring matter of logwood), give the same result.

PREPARATION OF VACCINE MATTER.—The *Centralbl. für die Gesam. Therapie* for January reports on a new method of preparing vaccine matter, introduced by Dr. Hager, of Neustadt-Magdeburg. This method applies to animal lymph, and consists in removing the pustules from the animal 120 hours after inoculation, drying them carefully in an exsiccator, and then reducing them to powder, which is again dried. The parts of the animal from which the pustules are taken are carefully washed with salicylic acid before they are removed, and the powder may be treated in the same way, before being dried, without injury to its specific properties. It may also be mixed with 1 part to 1,000 of corrosive sublimate, which will render all undesirable admixture harmless.

RESPIRATORY COMBUSTION OF YEAST-CELLS.—P. Schützenberger (*Compt. Rend.*, tome xcviii.) describes a series of experiments made with the view of ascertaining the effect of certain organic bodies on the respiratory combustion of yeast-cells. Similar sized flasks were filled with water saturated with oxygen, equal amounts of yeast were then added to them, and next definite weights of the substances to be experimented upon; after a given time the oxygen absorbed was titrated. The organic substances tried were different kinds of sugar, various alcohols and acids, glycerol, sodic acetate, hydrocyanic acid, and chloroform, &c. While some of these bodies exer no appreciable influence, others, like hydrocyanic acid an chloroform, stop or hinder it considerably. The absorption of oxygen is markedly accelerated by the presence o invert sugar, ethyl alcohol, and sodic acetate, and to a le degree by glycerin and the higher alcohols. Little or n influence is exercised by methyl alcohol. Ethyl alcohol it was found, undergoes slow physiological combustio equalling invert sugar in this respect. Indeed, the inver sugar may first be converted into alcohol before being co sumed; and, if this be really the case, then ethyl alcoh and the alkaline acetates would hold a very high ran among the bodies that are oxidised in the living organism

A MICRO-ORGANISM OF OLD CHEESE.—Dr. Deneke, of the Hygienic Institute in Göttingen, has been making experiments with a new micro-organism, closely re sembling the comma-bacillus of Koch, which he ha found in long-kept cheese (*Deutsche Med. Wochensch.* Jan. 15.) Its appearance is very like both Koch's comma-bacillus and the bacillus which Finkler and Prio found in the stools of cholera nostras; even with the bes microscopes very little difference could be made ou between them, the smaller size of the cholera-bacillus being the chief difference observable. Cultivation shows somewhat more difference in the three. The cholera spirillus grows slowly in gelatine, the cheese form more quickly, and that of Finkler very energetically. On potato-slices, on the other hand, Finkler's spirillus grows easily and at a low temperature, the comma-bacillus more slowly and only at a high temperature, and the cheese form not at all. The result of experiments on animals was still more remarkable, for even a large quantity of the fluid containing cultivated Finkler and cheese spirilli had no effect, or only a very slight one, on guinea-pigs, while the smallest quantity of the fluid containing Koch's bacillus, injected into the intestine, killed the animals in a few hours. The other two seem to be harmless forms of saprophytes, belonging neither to Asiatic cholera nor to cholera nostras.

BACTERIA TWO HUNDRED YEARS AGO.—The Amsterdam *Allgemeen Handelsblad* publishes a communication from Professor E. Cohn, of the University of Breslau, who recapitulates the substance of a correspondence of the celebrated naturalist Leeuwenhoek with Francis Aston, of London, a member of the Royal Society. Leeuwenhoek, writing from Delft, in 1683, reports that among the *débris* of food remaining between his teeth he had discovered, with the aid of the microscope, living organisms moving with great activity. He distinguishes various kinds among them, which he describes so precisely that they would be easily recognisable. One, which occurs least frequently, resembles a rod, the bacillus; others, twisting in curves, are bacteria; a third kind, creeping in snake fashion, is the vibrio ugula; another kind, of extreme minuteness, resembles a swarm of flies rolled up in a ball, and is evidently the micrococcus. Its movements cannot be traced with certainty. He says that this species seems to be made up of parallel threads, varying in length, and remaining immovable, while other specks move in and out through the web. Leeuwenhoek marvels that these things could live in his mouth, notwithstanding his systematic habit of cleansing it. He instituted observations which showed that they were also to be found in the mouths of other persons. Some years later he could not discover any traces of those minute organisms, and he was led to attribute their disappearance to the use of hot coffee. But shortly afterwards he rediscovered them as lively as ever. In September 1692 he sent some sketches of them to the Royal Society. Professor Cohn observes that it would seem from this correspondence that the knowledge concerning those minute entities made no advance for nearly two centuries, and he remarks on the wonderful skill with which Leeuwenhoek used the imperfect instruments of his time.

☞ IMPORTANT NOTICE.

HARTMANN'S HYGIENIC

WOOD WOOL

DIAPERS.

Owing to the increasing demand for Hartmann's Hygienic Wood Wool Diapers we were induced to enlarge our machines, and are therefore enabled to offer Hartmann's Hygienic Wood Wool Diapers in Packages at

2s. per DOZEN

(hitherto sold the half-dozen at 2*s.*). This enormous reduction in price brings Hartmann's Hygienic Wood Wool Diapers now within the reach of everyone, as they are thus by far cheaper than the usual expenditure in washing alone, not mentioning their many advantages so conducive to health and comfort.

HARTMANN'S HYGIENIC WOOD WOOL DIAPERS.

A GREAT BOON FOR HEALTH, COMFORT, AND CLEANLINESS.

If once adopted they will be found to be the cheapest and most appropriate Diapers ever produced.

UNEQUALLED and UNRIVALLED for GENERAL USE and ACCOUCHEMENT.

In the construction of these Diapers we have acted upon the suggestions of an **EMINENT LONDON OBSTETRIC PHYSICIAN**, who after repeated trials of them among his patients, now pronounces **HARTMANN'S HYGIENIC WOOD WOOL DIAPERS** perfect in material and form, and **THE MOST ABSORBENT, COMFORTABLE**, and **HEALTHFUL** (because Antiseptic) **APPLIANCE EVER PROVIDED** for this special purpose.

The essential requirements in Diapers are the rapid and thorough absorption of all secretions, and the prevention of odours resulting from decomposition. **NOTHING HITHERTO PRODUCED** answers these requirements so perfectly as **HARTMANN'S HYGIENIC WOOD WOOL DIAPERS, ONE OF WHICH IS EQUAL TO TWO OR THREE OF THE COMMON ABSORBENT COTTON WOOL PADS, AND THEREFORE THE CHEAPEST AND BEST ARTICLE OF ITS KIND IN THE MARKET. Indispensable to Ladies traveling. To be burned after use.**

ST. CLAIR THOMSON, Esq., M.B Lond., Resident Medical Officer to Queen Charlotte's Hospital, writes to the *British Medical Journal* of Nov. , 1884, on pages 868 and 869:—

'**AN ABSORBENT AND ANTISEPTIC DIAPER.**—The use of napkins as diapers after delivery has been discontinued in this hospital for some time. This was chiefly as a safeguard against septic contagion: the use of the napkin for a second time, however well the washing might be done, being attended with some risk. The napkins were deficient in absorbing powers, and of course had no antiseptic qualities.

'For some years now the diapers have been made of pads, of a mixture of cotton-wool and tenax (carbolised tow). They were destroyed after use, thus avoiding the risk of contagion; **but they were very little more absorbent than ordinary linen, and were but slightly antiseptic.** The tenax could not be used in large quantity, as it caused cutaneous irritation.

'Latterly, **Wood Wool has been introduced here with the best results.** It is enclosed in oblong bags of corrosive sublimate gauze. These are about seven inches long by three inches broad, and about half an inch in thickness. They are tacked on to strips of waste linen (about a yard and a half in length), by which they can be attached to the binder, and kept accurately in position.

'Thus made they are very light, weighing less than half an ounce each; they are soft, flexible, cool, can be closely applied, and **cause no irritation.** *They have a great capacity for rapid absorption.* A pad which weighed three drachms before use, when saturated with lochia cruenta, weighed two ounces and four drachms—that is, it took up and retained more than two ounces of blood. The pads do not become "soppy' unless left for some time after saturation; neither do they cake or become dry.

'The natural antiseptic properties of the **Wood Wool** are increased by the presence of corrosive sublimate, in the strength of half per cent. Wood Wool with a larger percentage of sublimate has not been tried, it being doubtful if the sensitive vulva would bear it; and as the diaper is changed night and morning, whether saturated or not, it is hardly required.

'**These are more economical than linen diapers, for there is not the price of linen to begin with, the expense of washing is saved, and a less number of draw sheets are required. They are now in regular use here.**'

Samples and Pamphlets of Hartmann's Hygienic Wood Wool Diapers and Patent Wood Wool are, on request, supplied to the Medical Profession gratis and post free, or a package of One Dozen Diapers at 2s. post free for P. O, or stamps.

For protection against useless and injurious imitations, the label of each package and every single diaper bears the name and trade mark of the Patentee and Manufacturer of Wood Wool—**PAUL HARTMANN, Heidenheim**—whose patent rights are rigidly protected.

The Exclusive Sale Right of PAUL HARTMANN'S DRESSING MATERIALS and HYGIENIC WOOD WOOL DIAPERS in the United Kingdom of Great Britain and Ireland and the British Colonies is possessed by

ESSINGER & NEUBURGER, 11 Hatton Garden, London, E.C.,

WHO SUPPLY THE WHOLESALE TRADE ONLY.

HARTMANN'S AWARDS:—

Exhibition, Stuttgart, 1881, **GOLD MEDAL**; Hygienic Exhibition, Berlin, 1883, **GOLD MEDAL**; International Pharmaceutical Exhibition, Vienna, 1883, **GOLD MEDAL**; Italian Exhibition, Turin, 1884, **GOLD MEDAL.**

Supplied by every Surgical Instrument Maker, Chemist, and Ladies' Outfitter throughout the world, at 2*s.* per packet of one dozen.

Notes on COMPRESSED TABLETS of

PURE PERMANGANATE OF POTASH.

1 and 2 grs. each; free from any addition or excipient.

PERMANGANATE OF POTASH was introduced as a remedy for *amenorrhœa* by Drs. Murrell and Ringer (the *Lancet*, Jan. 6, 1883). Their statements have been abundantly confirmed by the observations of Bartholow, Lvaff, Vargunin, and others. The remedy should be administered freely for three or four days before the expected period.

Permanganate of Potash is now given not only in amenorrhœa, but in *dysmenorrhœa*, *functional impotence*, and a number of other affections both in men and women. It is useful in *gastric and gastro-intestinal catarrh*, and checks the formation of *sarcinæ*. It is one of the best remedies for *obesity*, and is recommended in the treatment of *glycosuria* and *lithæmia*. As a disinfectant, it is used in *otorrhœa*, *ozæna*, *fetid breath*, and other similar affections.

DR. ROBERTS BARTHOLOW, Professor of Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia, says ('Permanganate of Potassium, its Action and Uses'):—

'One of the most important therapeutical applications of the permanganate of potassium, a recent discovery, is in the treatment of amenorrhœa. We owe this valuable improvement, as indeed many others, to Drs. Ringer and Murrell. They have shown that this remedy is remarkably certain when applied in suitable cases. Given in doses of two to five grains three times a day, for several days preceding the menstrual molimen, this *agent is quite sure to start the flow.*'

The *Lancet* says (Jan. 10, 1885, p. 70):—

'In amenorrhœa due to deficient activity it promotes the functions in a very remarkable degree. The class of cases to which the permanganate is adapted are those characterised by torpor, anæmia, or deficient activity of the menstrual apparatus.'

The LONDON MEDICAL RECORD (March 16, 1885) says:—

'We are satisfied they constitute by far the best remedy for amenorrhœa.'

DR. GAILLARD THOMAS, Clinical Professor of Diseases of Women in the College of Physicians and Surgeons, New York, in an address delivered at the annual meeting of the New York State Medical Association, Nov. 19, 1884, says:—

'Permanganate of potash as an excitant of the menstrual flow is, I think, the best emmenagogue which has yet been discovered.'

MODE OF ADMINISTRATION (CAUTION).

DR. BARTHOLOW says:—

'As this salt is so readily decomposed, yielding up its oxygen to any organic matter present, it is obviously necessary to be very careful in preparing and administering it. I have used the compressed tablets, which contain no excipient, and are therefore entirely free from objection, the material being simply compressed, without the addition of any foreign material. These tablets are typically adapted to the purpose; indeed, present advantages not possessed by any other possible mode of administration.'

It is now pretty generally known that Potassæ Permanganas is rendered inert, or converted into a dangerous explosive compound, if made into pills with ordinary excipients as often prescribed and dispensed. Physicians in prescribing the tablets will secure the true physiological action of the drug.

CAUTION.—*Directions for use*—One or two tablets to be taken with *half a tumbler of water or other liquid* four times a day, after meals. If taken on an empty stomach they are apt to give rise to pain in the chest; but administered as directed no inconvenience will be experienced.

IN DYSPEPSIA.

The *Lancet* says (Jan. 10, 1885, p. 70):—

'Eructations of gas, vomiting of a yeast-like material containing sarcinæ, and an acid fermentation of the starchy and saccharine constituents of the food are promptly relieved by the administration of the salt.'

The Medical Press and Circular (Jan. 7, 1885) says:—

'When the catarrhal process extends into the duodenum and also involves the bile ducts, the remedy has seemed to be highly efficient.' One tablet, *followed by a glass of cold water*, or other fluid, should be taken immediately after each meal.

IN GONORRHŒA, &c.

DR. BARTHOLOW says:—

'In gonorrhœa, leucorrhœa, and suppurating buboes, a strong solution is an efficient remedy. It has proved to be especially so in gonorrhœa.'

DR. PHILLIPS ('Inorganic Substances') says:—

'In gonorrhœa injections of the permanganate have been highly praised, especially in the second stage.'

One of the 1 gr. tablets should be *dissolved in two tablespoonfuls of water*, and this should be used frequently as an injection.

'In suppurating buboes the contents of the sac should be drawn off with an aspirator if still intact, or thoroughly evacuated if ruptured and the cavity filled with a solution made by dissolving three or four tablets in a *tablespoonful of water*.'

IN SNAKE-BITE.

DR. BARTHOLOW says:—

'Brought in contact with snake poison it destroys its toxic power. Thus, as Lacerda was the first to show (*Bulletin Gén. de Thérap.*, vol. ci., p. 325, &c.), if inserted into a wound made by a noxious reptile the poison is decomposed, and consequently has no effect on the system.'

DR. MURRELL ('What to do in Cases of Poisoning') says:—

'It is essential that the antidote should come in actual contact with the poison, and it is a good plan to inject it into the orifice made by the fangs of the snake. It is a chemical and not a physiological antidote. If the limb be much swollen make three or four injections at the circumference of the swelling.' *The solution should be freshly prepared* by dissolving a tablet in a teaspoonful of water, and a few drops of this should be injected with the hypodermic syringe into the orifice.

DR. VINCENT RICHARDS, of Goalunda, Bengal, advises in every case that three or four injections should be instantly made in a circle round the fang puncture at about half an inch to an inch apart. This ensures the contact of the permanganate with the poison.

IN SYPHILIS, &c.

DR. BARTHOLOW says:—

'Lacerda's experience with permanganate in snake-poison renders it almost certain that in the corresponding poison of syphilis the local application of this remedy at the earliest moment to an infecting chancre may be productive of the best results. In all forms of unhealthy and sloughing syphilitic sores—in sloughing phagedæna, for example—it deserves more extended use than has heretofore been made.'

IN DISCHARGES FROM THE EAR, &c.

DR. BARTHOLOW recommends it in otorrhœa, ozæna, fetid breath, fetid sweating of the axillæ and feet, and in general 'wherever on the surface of the body there are odorous discharges and emanations.' For this purpose from two to five tablets should be *dissolved in an ounce of water.*

AS A DEODORANT.

DR. BARTHOLOW says:—

'As a deodorant, and so far a disinfectant, this agent has a large sphere of usefulness in medical practice.' A powerful disinfectant fluid may be made by dissolving half-a-dozen tablets or more in a pint of water. It is much more active when freshly prepared.

AS A TEST FOR THE PURITY OF WATER.

DR. BARTHOLOW says:—

'Dropped into the water under examination the beautiful violet colour imparted to it should not be discharged. The prompt disappearance of the colour signifies the presence of chemical agents fatal to the permanence of the salt.'

The Compressed Tablets of Permanganate of Potash may be obtained from Chemists generally, or from the Manufacturers (by the Wyeth process), Messrs. BURROUGHS, WELLCOME, & CO., SNOW-HILL BUILDINGS, LONDON, E.C., who will forward trial specimens free to members of the profession and hospitals and dispensaries upon request.

The London Medical Record.

ARTICLE 3902.

OSLER ON MALIGNANT ENDOCARDITIS.

In the *Brit. Med. Jour.* for March 1885, pp. 467, 522, 577, are published the Gulstonian Lectures delivered at the Royal College of Physicians by Dr. William Osler, on the subject of malignant endocarditis. In studying this disease, the author divides cases of acute endocarditis into simple and malignant; the simple being those with few or slight symptoms, and which run a favourable course; the malignant including cases with severe constitutional disturbance and extensive valve-lesions, whether ulcerative or vegetative. Malignant endocarditis occurs under the following conditions: 1, as a primary disease of the lining membrane of the heart or its valves, either attacking persons in previous good health, or more often attacking the debilitated and dissipated, or those with old valve-lesions; 2, as a secondary affection in connection with many diseases, particularly rheumatic fever, pneumonia, scarlet fever, diphtheria, ague, &c.; 3, as an associated condition in septic processes, traumatic or puerperal. The *lesions* of malignant endocarditis may be vegetative, ulcerative, or suppurative; and these various forms may occur alone or in combination.

The lecturer then goes on to study the *histological characters* of the disease. A small fresh endocardial vegetation is made up of cells derived from the subepithelioid layer, which by their proliferation have produced a small nodular projection on the surface of the endocardium. If the mass grow rapidly, it will present the characters of a soft granulation-tissue; but if it grow slowly, it will become firm and fibrous. The vegetations characteristic of malignant endocarditis consist of a granular material composed of altered and dead tissue elements, fibrous exudation, and colonies of micrococci. At the attachment of the vegetation, there is a zone of tissue deeply infiltrated with leucocytes. This aids in the destruction of the valve-tissue.

The *pathological changes* associated with endocarditis are next considered. For instance, in the endocarditis of septic processes there is a local lesion, and there may be extensive mischief wrought by emboli; these cases may be divided into those where the infarcts are simple, not suppurative, those in which there are innumerable suppurative infarcts, and those in which some of the infarcts are simple and some suppurative.

The second lecture commences with the *symptoms* of endocarditis, the features of which are so diverse that the author considers the cases in groups. First, attention is drawn to cases in which the endocarditis is merely a part of a septic or pyæmic state, the result of an external wound, a puerperal process, or an acute necrosis. Next, the pyæmic group of cases is taken. Here the clinical features are of a decided pyæmic type, and the source of infection is at the heart, and the metastatic lesions are chiefly in the arterial system. Two types are recognised—1, the cases in which the symptoms resemble closely those of ordinary pyæmia; and 2, an important group in which intermittent pyrexia is a striking feature, occurring in regular paroxysms like ague, with cold, hot, and sweating stages. The most common type is the typhoid; the characters of this form are irregular temperature, early prostration, and involvement of the nervous system. Many of these cases are really mistaken for typhoid fever, as the heart-symptoms may never be prominent. Another group of which the author speaks is the cardiac group. Under this heading, Dr. Bramwell has suggested, those cases may be arranged in which patients, the subjects of chronic valve disease, are attacked with febrile symptoms and evidences of a recent endocarditis engrafted upon the old process. These are the cases which present fewest difficulties in diagnosis. The next group includes cases with symptoms of cerebral or even cerebrospinal trouble; they generally run a rapidly fatal course.

Several cases are described illustrating the various groups, and certain clinical features are specially referred to in a few words. Among these, the irregularity of the fever is noticed: then some observers have described a rash in some instances, the most common form being the hæmorrhagic, in the form of small petechiæ, distributed over the trunk, particularly the abdomen, less frequently on the face and extremities. The mental symptoms may be of a very varied character, but generally they assume a dull, semi-conscious, apathetic state. Sweating is a frequent symptom, and assumes a drenching character, second only to ague. Heart symptoms are usually latent, and are likely to be overlooked unless especially searched for; and, even on examination, there may be no murmur present, with extensive vegetations. There are many cases on record, by careful observers, in which the examination of the heart was negative.

The *course* of the disease presents many varieties. Very acute cases may end in a week; and, except in very chronic cases, the course is rarely prolonged beyond four or five weeks, many terminating in about ten days.

The third lecture commences with the study of the *diagnosis*, and the author states that few diseases present greater difficulties in this matter. Many skilled physicians who have put their cases on record, have failed to diagnose more than one-half of them until the *post mortem* examination was made.

With regard to the *etiology* of the disease, the author states that the period of middle life gives the greatest number of cases, males are more subject than females in the proportion of about 3 to 2. The existence of sclerotic valvulitis is a very important factor in the etiology of severe endocarditis.

The pathology of malignant endocarditis is summed up briefly by Dr. Osler in this form. 'It is in all its forms an essentially mycotic process; the local and constitutional effects being produced by the growth on the valves, and the transference to distant parts of microbes, which vary in character with the disease in which it develops.' In cases of puerperal and traumatic septicæmia, the external lesion is undoubtedly the source of infection, and in these cases the right heart is most often affected. In other instances, when the skin is unbroken, the micrococci probably gain access by the lungs or intestines, and in these instances, the left heart is the chief seat of the mycosis. The author agrees with Klebs, who supposes that the micrococci reach the heart with the general blood-current. Further research is, however, necessary before any certain conclusion can be arrived at, and the author ends these interesting lectures with the following remarks. 1. We do not yet know, with sufficient accuracy, the frequency of the occurrence of microbes in simple endocarditis; whether they are constantly present, or only in forms associated with special diseases. 2. We want full information of the various forms of micro-organisms occurring in secondary endocarditis, and of their relation to the microbes assumed to be the cause of the primary disease. 3. We are only at the threshold of inquiries relating to the culture of these organisms, to the characters of their growth, and to the possible experimental production of endocarditis. Richard Neale, M.D.

Article 3903.

HOLMES ON OPERATIVE DILATATION OF THE ORIFICES OF THE STOMACH.

In the *Brit. Med. Jour.*, Feb. 1885, p. 372, Mr. T. Holmes gives a summary of two papers by Prof. Loreta, of Bologna; the first on digital dilatation of the pylorus, and the second on instrumental dilatation of the œsophagus. The first paper contains the history of a case in which the operation was performed as a substitute for resection of the pylorus, and the second, of a case in which instrumental dilatation of the œsophagus was performed instead of gastrostomy.

The pylorus was dilated in a man, aged 47, who for twenty years had suffered from dyspepsia, and had been markedly becoming worse during the last five years. Whenever he took food, he could feel its passage towards the right hypochondrium, whence it returned at once to the left, causing eructations and frequent vomitings. The man looked lean and wretched, and weighed 112 lbs. Pyloric obstruction was diagnosed; due to chronic causes, and not to cancer. It was decided to operate, and on Sept. 14, 1882, Prof. Loreta made an incision on the right side of the median line, for about five inches, commencing about an inch below the xiphoid cartilage, to a point about one inch from the cartilage of the ninth rib. The muscles were divided, and all hæmorrhage stopped before the peritoneum was opened. Some trouble was found in detaching the omentum (which was adherent) from the parietal peritoneum, and also from the pylorus and right half of the anterior surface of the stomach. The coats of the stomach were then lifted up into a transverse fold, and a cut made through them with strong scissors, midway between the two curvatures about one inch from the pylorus. The right forefinger was then introduced, and the pylorus examined; after some difficulty, and by help of the left index finger, the pyloric orifice was gradually dilated until the fingers were seen to be quite three inches apart. The wound in the stomach was then sewn up, and the abdominal wound closed. The whole operation lasted thirty-three minutes. The patient made a rapid recovery, and began a meat-diet in eight days. Six weeks after the operation he had gained 22 lbs. in weight, and in five months he was in perfect health, doing his ordinary work.

The second treatise deals with the instrumental dilatation of strictures of the œsophagus as a substitute for gastrostomy. Two cases are recorded; one of a young man, aged 24, who suffered from contraction of the œsophageal end of the stomach, caused by swallowing a strong caustic solution; the second, of a young woman, who for eight years had experienced difficulty in swallowing, with no assignable cause. This increased until she was almost starved from want of nourishment.

The same operation was performed in both cases; an incision five inches long was made through the abdominal wall from the xiphoid cartilage downwards, and somewhat to the left. After some difficulty the stomach was drawn out of the wound, and a longitudinal incision made through its walls between the two curvatures, having its upper end as near the cardia as possible. The orifice of the œsophagus was found after much searching, and the dilator was introduced; the blades were separated to the extent of nearly two inches, and the instrument was run up and down the tube four times. Then the wound was sewn up, the stomach returned into the abdomen, and the outside wound was united by sutures. Both patients rallied well, but both, on the fourth day, were seized with an attack of dyspnœa, which lasted about five days. By the twentieth day both patients were able to take both solids and liquids, and had quite recovered.

The conclusions arrived at by Professor Loreta are these. 1. Instrumental dilatation of the œsophagus, through a wound in the stomach, seems far preferable to gastrostomy, since the former effects a radical cure, whilst the latter leaves the stricture uncured. 2. Operations on the stomach are of good prognosis, judging from the results of cases already treated by Professor Loreta and one or two other surgeons in Italy. Richard Neale, M.D.

Article 3904.

MORRIS ON SOME POINTS IN THE SURGERY OF THE KIDNEYS.

In the *Brit. Med. Jour.*, Feb. 1885, p. 311, is published a paper read at the Medical Society of London by Mr. Henry Morris on the surgery of the kidneys. The author starts by saying that such operations as nephrotomy, nephrolithotomy, and nephrectomy are now recognised as justifiable, and therefore divides his paper into three parts: 1. The symptoms which should guide one to operate; 2. which of these operations is best adapted for particular cases; 3. how to find out the working power of the second kidney, or even if there be a second kidney at all.

Before a surgical exploration of the kidney is undertaken two things are requisite; (*a*) symptoms must exist which are regarded as characteristic of renal calculus; (*b*) these symptoms must have shown themselves irremediable by medicinal treatment. The symptoms of renal calculus are renal colic, the presence of blood and pus in the urine at variable times, the absence of morbid conditions of the bladder and prostate, and frequency of micturition. Unfortunately, these symptoms do not always mean the presence of a renal calculus, as the author possessed notes of sixteen cases typically indicative, in which surgical exploration failed to detect a stone. The lumbar incision is practically without danger, and many morbid conditions existing in these cases were relieved by the nephrolithotomy, notwithstanding no calculus was detected. Excessive mobility of the kidney was relieved. This may be explained by the fixation of the organ, resulting from the inflammatory changes due to the operation. In other cases, the pain may have been relieved by division of the nerves in the neighbourhood of the kidney. Or, again, the relief produced may be due to tension being removed, as in cases of chronic perinephritis, a view which receives the support of Mr. Marcus Beck. Renal hæmorrhage, in a majority of cases, is due to a renal calculus, but still it may be caused by a mere relaxation of the blood-vessels, or from some simple increase of intrarenal blood-pressure; if this should occur in rheumatic, hysterical, or highly neurotic individuals, the symptoms of renal colic may be very closely simulated. The greatest difficulty is experienced in diagnosing between early strumous kidney and renal calculus. When frequency of micturition and slightly purulent urine are met with in a person of strumous habit, the strumous nature of the disease is fairly clear, but if hæmaturia be present the diagnosis is rendered uncertain.

The author then goes on to consider which of the operations should be resorted to in particular cases. In cases of floating kidney, nephrectomy is not justifiable until nephrorraphy, as well as mechanical appliances, has failed. With regard to wounded kidneys, much has to be taken into consideration; but if the indications of injured kidney or pelvis of kidney be marked, and the gravity of the case be urgent, an incision should be at once made over the seat of injury, and drainage or nephrectomy performed, according to circumstances. In strumous affections, nephrotomy will often be found to give relief; but if the disease be limited to one kidney, and there be danger of lardaceous disease from prolonged suppuration, then nephrectomy promises the only means of prolonging life. It is in cases of scrofulous kidney, that the surgeon requires most especially to know the working capacity of the second organ. Reference was made to methods for ascertaining the existence of a second kidney, and special mention was made of Dr. Tuchmann's instrument; but Mr. Morris was not inclined to believe that much reliable information could be gained by such plans, except in the hands of experts, and thought that greater advantage would be secured by following out the plan, suggested by Drs. Thudichum and Ralfe, of ascertaining the proportion which the amount of urea bears to the whole amount of solids passed. RICHARD NEALE, M.D.

ARTICLE 3905.

CUCAINE AS A LOCAL ANÆSTHETIC.

SEVERAL papers have lately appeared in the medical journals on the subject of cucaine as an anæsthetic. In the *Brit. Med. Jour.*, November 1884, p. 1074, Dr. Prosser James writes that he has used a weak solution of the hydrochlorate of cucaine with great success in cases of intralaryngeal operations. A solution of 2 to 4 per cent., painted over a mucous membrane once, twice, or thrice, at intervals of three to five minutes, produces local anæsthesia, lasting from a quarter to half an hour, and that without exciting any irritation whatever. It is extremely useful also in cases of extreme irritability of the fauces in phthisis and other diseases.

In the *Lancet*, November 1884, p. 975, Mr. Henry Power writes in high praise of the advantages to be derived from the use of a 4 per cent. solution of cucaine in operations upon the eye. It acts excellently as a local anæsthetic, rendering the conjunctiva and cornea insensitive in the course of a few minutes. Mr. Power has used it in cases of cataract, and all the patients on whom it was tried said they felt no pain to complain about during the operation. He also used it in a case of a child who was operated upon for squint; lastly, he used it in iridectomy for glaucoma, and the patient only felt slight pain whilst the sclerotic was being incised. Dr. Butlin also writes in the *Lancet*, Nov. 1884, p. 975, detailing his own personal experience of the effect of cucaine on the interior of the nose. He was obliged to have the mucous membrane covering the middle and inferior turbinated bones cauterised, and, after having painted the surface with a 20 per cent. solution of the muriate of cucaine, he was able to bear the application of the cautery without any sensation of pain.

In the *Brit. Med. Jour.*, December 1884, p. 1161, Messrs. Brock and Arkle, of University College Hospital, contribute their experiences of the hypodermic injection of cucaine. The authors injected the solution into one another's arms, thighs, fingers, &c. The effects which were common to all the injections were smarting, followed by numbness and redness round the point of injection; in from two to three minutes sensation to touch was diminished, to pain and temperature completely abolished. In every experiment except the last, when half a grain was injected into the forearm, the anæsthetic area was more extensive immediately above the point of injection than below. In one case the local effects were marked for six inches below the point of injection, in a straight line, by half an inch broad, and only half an inch above; in the other, the effects were only marked over an area of one inch square. The general effects were also dissimilar. In the former there was a decided exhilaration of spirits and quickening of the pulse from 80 to 100 per minute; in the latter, a feeling of weight and oppression about the chest, with sighing respiration. Two practical illustrations are also noted of the utility of the drug when hypodermically injected for minor surgical operations; a bubo and an inflamed bursa patellæ having been opened without the least suffering to the patient, after an injection of one-seventh of a grain.

In the *Brit. Med. Jour.*, December 1884, pp. 1188 and 1189, several letters are published on the subject of cucaine. Dr. Morell Mackenzie says he has found the hydrochlorate of cucaine extremely useful in operations for the removal of nasal polypi. The solution should be applied to the whole of the mucous lining of the nasal fossa. About three minutes after the application an operation can be commenced. It is also most useful in cases of laryngeal phthisis, in which there is great odynophagia, owing to swelling of the epiglottis. Patients, who before could swallow only with extreme pain and difficulty, have been enabled, about ten minutes after the application, to swallow with perfect ease and comfort. Both for the larynx and for the nose a 20 per cent. solution of the drug is employed. The author thinks that a somewhat weaker preparation would prove a valuable remedy in hay-fever.

Dr. Watson Campbell contributes a note on the value of a compound tincture of cuca leaves he has obtained from Messrs. Duncan & Flockhart, Edinburgh; every 20 ounces of this tincture represent 5 ounces each of cuca leaves and hops. A drachm of this tincture, taken three times a day, is most useful as a restorative in physical exhaustion from any cause, also as a calmative and hypnotic in cases of mental irritation and insomnia; and in cases of weak cardiac action, with frequent recurrence of threatened syncope, it has appeared to invigorate the heart.

Dr. Lloyd Owen writes that he has found cucaine of great use, in combination with atropine, in the treatment of certain diseases of the eye. It is used in the proportion of equal parts of an 8 per cent. solution of hydrochlorate of cucaine and of the liquor atropiæ sulphatis, B.P. With this combination, immediate and lasting relief is given in keratitis and corneal ulcer, and also in sclero-conjunctivitis and iritis. The effect is more quickly produced, and more marked, than that of atropine alone, and the relief more lasting than that of cucaine.

Dr. Wm. Murrell writes concerning the value of cucaine in neuralgia; he uses it as an inunction of 20 per cent. solution in oil of cloves. This is rubbed on the painful spot for five or ten minutes with the finger, and almost instant relief is obtained. Six cases of supra-orbital neuralgia received marked relief from this plan of treatment.

RICHARD NEALE, M.D.

ARTICLE 3906.

LOPATIN ON HYDROCHLORATE OF CUCAIN.

DR. N. K. LOPATIN, of Stavropol, describes (*Proceedings of the Caucasian Medical Society*, No. 12, 1884) the results of his observations on the general and local action of cucain. *General Action.*—This was studied in four nervous persons (three women, one man), to whom cucain was administered internally, in doses of one-sixth to one-fourth of a grain, once a day. In women, there was observed, in five or seven minutes after taking, an increase in the frequency of the pulse (amounting to from 15 to 35 beats per minute), which lasted for about half an hour. At the same time the pulse (both in women and in men) became stronger and fuller, remaining so during the whole twenty-four hours. Of other symptoms, there were noted drowsiness (in two of four persons, after the first doses), cardiac palpitation (in one), slight giddiness (one), headache (in one once), tension in the head (in an anæmic woman, after each dose, for fourteen successive days), and slight constipation (in the same anæmic woman). Notwithstanding all these trifling symptoms, all the patients invariably felt stronger and more cheerful. An anæmic lady who, before the experiment, could only with difficulty creep from her carriage up a short flight of the stairs at her lodging, was able, after six doses of cucain (in as many days) to easily walk through several streets at a time, or even to climb up a hill without any fatigue or dyspnœa. *Local Action.*—In four patients with eye-diseases, a 2 per cent. solution of cucain was used. In one of the patients, who suffered from an acute conjunctivitis on a trachomatous ground with intense irritative phenomena (blepharospasm, photophobia, lacrymation, and pain), the latter disappeared completely after three instillations, and did not return. In another, with intense photophobia and blepharospasm from an old pannous keratitis, cucain utterly failed to relieve the symptoms, in spite of repeated applications. In a third and similar patient, four instillations relieved the irritation but partly. In a fourth patient, with chronic trachomatous conjunctivitis with intense hyperæmia of the thickened conjunctiva and discs, three instillations of cucain seemingly produced a temporary constriction of the vessels of the fundus of the eye. Dr. Lopatin tried, also, the local application of a cucain solution (one grain to one ounce of water, on a piece of hygroscopic cotton-wool) in a case of agonising toothache, with bright redness and considerable swelling of the gum and with profuse salivation, in a young lady. After two applications in half an hour, the toothache and salivation disappeared, giving place to numbness on the diseased side, and the patient fell asleep for the first time after three sleepless days and nights. On the next day, the hyperæmia of the gum was found diminished. The feeling of numbness gradually passed away in two days.

V. IDELSON, M.D.

ARTICLE 3907.

CECI AND KLEBS ON THE ETIOLOGY OF ASIATIC CHOLERA.*

THE comma-bacilli are not invariably to be found in the fæces, nor in the intestinal contents, of individuals dying rapidly of cholera. Sometimes they are to be met with in small number, and in some evacuations they may be entirely wanting; therefore, without questioning their pathogenic importance, their diagnostic value is uncertain. True Asiatic cholera may be present, although in certain evacuations no comma-bacilli are to be found. When comma-bacilli are present in the stools, they are always mixed with short spirilla, which represent the union of two or three comma-bacilli. If cholera-stools containing comma-bacilli be left for some time at the ordinary temperature, the following facts are observed. On the second day the spirilla increase considerably in number and length; on the third or fourth day the stool becomes a true pure cultivation of spirilla, some of which are extraordinarily large, from ten, twenty, to thirty curves. On the succeeding days the spirilla rapidly diminish, and are supplanted by spherical, oval, or linear schizomycetes of putrefaction (Ceci). The comma-bacilli may proceed from the division of the spirilla. Under the microscope, the spirilla can be seen in process of division. Spirilla are observed divided into five or six comma-bacilli at one extremity, while the other extremity remains continuous. Probably the comma-bacilli build up the spirilla. So far, no spores have been seen in the spirilla. During the marvellous formation of spirilla, the evacuation remains neutral or alkaline, and its reaction does not even change during advanced putrefaction, when spirilla and comma-bacilli have disappeared (Ceci). The mycotic invasion of cholera is localised solely in the intestine. The blood, liver, spleen and kidneys contain neither comma-bacilli nor other micro-organisms, neither are they present in the air expired by patients during the algide stage (Ceci). The blood in the algide stage presents no morphological alterations beyond an increase of the white corpuscles, and deeper coloration of the red corpuscles, due to the cyanosis. From the stools in an advanced stage of putrefaction, in which careful examination revealed no vestiges of the comma-bacilli, pure cultivations of these organisms may be obtained by successive cultivations (Ceci). The symptoms, death, and alterations of organs of individuals affected by more rapid forms of the disease, cannot be explained by the scanty lesions found in the intestines. In very recent cases, those in which the epithelium is still found *in situ*, comma-bacilli are not found in the glands (Lieberkühn) although the mucous membrane is much infitrated with lymphatic cells (Klebs). The most important anatomical lesions are found in the kidneys. The cortical substance, macroscopically, appears only to be paler than usual; but, when the preparations are dyed with violet of gentian the results obtained are surprising. The convoluted tubules are not coloured, and lose readily the colour in alcohol, so that by the ordinary method they remain uncoloured. The nuclei either disappear altogether, or only contain remains of substance which is coloured. The cellular substance is very swollen, rather turbid, and in great part fills the tubules. The progress of this necrosis by coagulation may be followed in one convoluted tubule. The necrosis attacks the epithelium, which, according to the investigations of Heidenhain, secretes the specific components of the urine, the epithelium of the convoluted tubules, and that of the widest part of the ascending branch of the loop of Henle (Klebs). Ceci affirms that the comma-bacilli and the spirilla of Asiatic cholera, as regards their morphological characters, are identical with comma-bacilli and spirilla obtained by the cultivation of the evacuations of cholera nostras by Finkler and Prior. Klebs has seen the same form of spirilla in the diarrhœa of a patient suffering from pneumonia. The probability is that in Asiatic cholera a substance is produced which attacks the cellular protoplasm; that this substance, formed perhaps by the activity of the spirilla in the intestine, is reabsorbed; when *diluted* in contact with the tissues it produces an atrophic state (in the spleen, liver, cutaneous surface, &c.); *concentrated*, it leads directly to necrosis, as in the veins. A series of grave nerve-symptoms must be considered as uræmic, according to Maragliano and others. The arterial thomboses, which sometimes supervene and even terminate in necrosis, may be occasioned by a similar alteration of the vascular walls.

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* CECI AND KLEBS.—On the Etiology of Cholera Morbus. (*La Riv. Internaz. de Med. y Chir.*, and *El Siglo Medico*, Jan. 11, 1885.)

A summary of the latest researches of Dr. A. Ceci is given in *La Salute*, Fasc. i. for 1885.*

1. Animals (dogs, rabbits, fowls, guinea-pigs, monkeys, rats) fed upon food and drinks mixed with fresh and putrefying cholera matter (vomit, fæces, and intestinal contents) were none the worse for it. That this, however, is not the case in man, Dr. Ceci had a terrible experience in his laboratory at St. Andrea, Genoa. His assistant, Pasquale Baldissarelli, was accustomed to keep his lunch in a cupboard where the infective matters, fæces, vomit, &c., were also kept, and where, therefore, contamination of the food was most easy. Probably he swallowed daily a certain quantity of the infective material with his lunch; but this did not hurt him as long as his stomach was in good order. After a more sumptuous supper than usual, infection took place. The next morning he had profuse diarrhœa, and the day after presented himself at the laboratory already cold and aphonic. On the fourth day he died. The epidemic had at that time ceased for several days.

2. Direct injection of fresh or old fæces and of recent or putrefying intestinal contents into the small intestine of rabbits, dogs, guinea-pigs, monkeys, and fowls, gave no positive results.

3. After ligature of the common bile-duct (Nicati's experiment), the direct injection of fæces or intestinal contents into the small intestine caused death in rabbits in two or three days. The intestine of these rabbits was full of a whitish liquid like rice-starch, which contained very numerous comma-bacilli.

4. When the fæces and intestinal contents had undergone advanced putrefaction, negative results were generally obtained, even when the injection was preceded by ligature of the common bile-duct.

5. By following Koch's directions, perfectly pure cultivations of comma-bacilli and spirilla were obtained in gelatine. It was found very difficult to separate cholera-bacilli from other schizomycetes by the method of successive cultivations, although these were made every twelve hours. In all cases, it was found well not to exceed the temperature of 22° C. to 30° C. in the incubation-stove.

6. In pure cultivation in gelatine, the cultivation-material is dissolved, but shows no signs of putrefaction. In agar-agar, care being taken to infect uniformly the whole surface of the cultivation-material, round, miliary, raised colonies are formed, colourless, or very slightly greyish-white, not phosphorescent, and of so characteristic an aspect as to be readily distinguished by the naked eye from the colonies of any other sort of schizomycetes. The colonies become gradually fused into a transparent or slightly opaline substance, raised on the surface of the cultivation-material. Such is the most pure form of cultivations of the comma-bacilli. On agar-agar also, when the comma-bacilli are developed pure, no putrefaction takes place after an indefinite time. The colonies are so characteristic, that they can be readily distinguished, even in a very impure cultivation. In some cultivations a remarkable aromatic odour, resembling that of acacia flowers, is developed.

7. In pure cultivations in agar-agar after some time—from twenty days to two months, and in special conditions—the transparent or slightly greyish round elevations of the colonies seem to vanish, and the cultivation-material becomes so limpid that by transmitted light it may be mistaken for sterile, while the surface with the light falling on it appears morbidly and finely hairy.

8. Cholera-bacilli are developed just in the same way and without appreciable modifications in cultivation-materials, as broth and agar-agar, already putrefied from preceding cultivations of various schizomycetes, but afterwards sterilised by prolonged boiling (six hours). Evidently, the fixed principles of putrefaction are no obstacle to the life and development of the cholera-bacilli.

9. Injection of pure cultivations of the age of two to four days (twenty-second and successive operations) directly into the small intestine of rabbits and guinea-pigs, without ligature of the common bile-duct, killed the greater part of the animals operated on in two or three days. It had no effect in a dog. The animals after some time refused their food, presented marked cyanosis of the ears and visible mucous membranes, the temperature falling to 38°, 37°, and 36° Cent. in the rectum in rabbits, and diarrhœa. On *post mortem* examination, the lungs were normal; the heart and large veins were full of dark fluid blood; the spleen was firm, its capsule shrunken; the small intestine was very full of a greyish-white liquid like rice-starch, with no colour of bile; the mucous membrane of the small intestine was pale, the solitary follicles sometimes apparent; Peyer's

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* Ceci, Antonio.—On the Etiology of Asiatic Cholera. (*La Salute*, Fasc. i., Anno 1885.)

patches were normal; the large intestine contained little or no semi-fluid excrement; the gall-bladder was full and distended with bile; the kidneys were more or less pallid (lesions of rapid cholera). A guinea-pig, dead on the sixth day, presented great hyperæmia of all the small intestines, with softening of the mucosa. The lesions were most intense in the ileum; the intestinal contents were hæmorrhagic; the lungs and kidneys were full of blood (lesions of old cholera or consecutive lesion).

10. The rice-starch intestinal contents consisted of cells and plates of intestinal epithelial cells swimming in serum. Very numerous comma-bacilli were found in it, their presence and number having no apparent relation to the duration of the morbid process. The intestinal contents left at the normal temperature (12° to 16° C.), on the second and third day showed numerous large, very long spirilla, which disappeared on the fourth day.

11. The blood and the hepatic and splenic tissue of animals, killed by the injection of cholera-cultivations into the small intestines, contained no organisms; and their cultivations proved invariably sterile.

12. From the cultivations of the intestinal contents of animals killed by the injection of pure cholera-cultivations, very abundant comma-bacilli were obtained, from which pure cultivations could be obtained only five times successively.

13. With the direct injection into the small intestine of the characteristic intestinal contents of a rabbit dead from cholera, choleraic forms and death were obtained in other rabbits.

14. Pure cultivations of cholera-bacilli obtained from the cultivation of the intestinal contents of rabbits dying from cholera, from inoculation directly into the small intestine, killed other rabbits and guinea-pigs, which presented the clinical symptoms and characteristic lesions of cholera.

15. In pure cultivations, from conditions not well determined, among which are the age of the cultivations, the relative desiccation of the cultivation material, and the low temperature at which the cultivation has been kept, swollen comma-bacilli with a refracting sphere in their centre can be seen. This sphere, contrary to what happens with the rest of the bacillus, remains colourless in preparations treated with aniline dyes. This is the cholera-spore. In pure cultivations in agar-agar which have undergone the modifications noticed in paragraph 7, microscopic examination reveals in some scarcely any traces of comma-bacilli or spirilla, in others none at all. On the other hand, all cultivations show small cocci and spherical diplococci, or chains of spherical cocci arranged in spirilliform lines. These colour well with methyl-violet or Weigert's fluid. These are the cholera-spores, which may develop into either comma-bacilli or spirilla, and which have become free by the destruction of the commas or spirilla.

16. If these cocci and diplococci and spirilliform chains be cultivated, perfectly pure cultivations of cholera comma-bacilli are obtained.

17. Cholera-spores mixed with sterilised sand and kept at a temperature of 36° Cent., after complete drying for twenty-four hours, sown in cultivation liquids, remained sterile for an indefinite time (twenty days).

18. Subcutaneous, peritoneal, or pleural injections of fresh watery extracts of the viscera (brain, liver, spleen, kidneys) of patients dying from rapid forms of cholera, had no effect on dogs or rabbits.

19. Intravenous injections of the same also had no effect.

20. Abundant intravenous injections of the first urine passed after the disappearance of the algide stage produced no effect in rabbits.

The results obtained by Nicati in rabbits from the direct injection into the small intestines of cholera fæces after ligature of the common bile-duct, and by the author in rabbits with the same process, by Koch in guinea-pigs from the direct injection into the small intestines of comma-bacilli of the fourteenth generation, and again by the author in guinea-pigs and rabbits similarly from the simple direct injection into the small intestine of a pure cultivation of the twenty-second generation, afford clear proof that the bacillus or spirillum is the cause of Asiatic cholera. In the animals injected by Ceci not only were the characteristic *post mortem* alterations found, but during life the clinical form of Asiatic cholera, in its most culminating symptoms of cyanosis and fall of temperature, was observed. The extreme smallness and great hardness of the spleen decisively excluded any form of septic infection, as did also the constant sterility of cultivations attempted with the blood and organs. Pure cultivations, too, obtained from the intestinal contents of animals which had succumbed, proved just as securely fatal when injected into the intestines of others. Ceci considers that no other infective disease, perhaps not even excepting carbuncle, has hitherto obtained such precise experimental confirmation as cholera.

The cholera-infection is exclusively localised in the intestine, and, at first, especially in the small intestine, the agent of infection—the bacillus—never penetrates into the tissues. When the bacillus, the obstacles (gastric juice, &c.) being overcome, finds the means of developing, it produces a series of phenomena which must be held as depending on reflex nervous action. A permanent contraction of the common bile-duct commences, by which the bile, hindered from entering the duodenum, accumulates in the gall-bladder; intestinal serous transudation follows, with enormous shedding of epithelium, diarrhœa, and vomiting. The vomit and dejections are characteristic. Soon the nervous perturbations pass beyond the bounds of the abdominal circle. Aphonia, spastic arterial contraction, cyanosis, and cramps, follow; the renal secretion is suspended; and the temperature falls. If death do not now take place, the consequences of the more or less long suspension of the life of the tissues and of the losses sustained follow; of the desiccation when this occurs; of the insufficiency of the peripheral arterial circulation; of the retention in the organism of so many excrementitial products from the cessation of the urinary secretion, &c. This is the typhoid form, in which numberless different composing elements must be considered. The author does not hold it probable with Koch, Klebs, and others, that the bacillus acts by secreting a poison which, when absorbed into the blood, gives rise to the well-known grave symptoms and death; he maintains that the action of the bacillus is entirely local, perhaps mechanical, and that the disturbances provoked are the consequences of reflex nervous action. The gastro-intestinal excitability is exalted from the commencement: vomiting, diarrhœa, spastic contractions of the common bile-duct, &c. Afterwards innervation is weakened and almost extinguished in the intestine, which is affected by processes of altered circulation, hyperæmia, stasis, partial or total gangrene; and it is marvellous that these last alterations may give rise to absolutely no symptoms. The algide stage of cholera has a striking resemblance to shock from strangulated hernia or grave abdominal operation. In both are found the same fixed vacant face, the same anxious frightened looks; in both the eyes are glassy and motionless, the pulse very frequent or imperceptible, the skin rigid, cold, and covered with clammy sweat. In cholera, however, there is cyanosis, more grave aphonia, and the pulse is even smaller or altogether absent. To explain these symptoms by thickening of the blood and drying of the tissues, at all events in the epidemic at Genoa, is to contradict the facts observed. Many patients had scarcely any diarrhœa or vomiting, and after death the intestinal contents did not amount to half a litre; the mass of the blood was not visibly diminished or less fluid, although dark. The organism can bear immense loss of liquid, without great harm being felt. In certain forms of cholera with intense diarrhœa, the drying indeed exists; but by it the phenomena of cholera are not sufficiently explained, for the drying by itself produces little or nothing, while in the most fatal forms it may be altogether wanting. It is the phenomena of exalted, perverted, and finally abolished innervation, which are never wanting, and which at first are of reflex kind. Diarrhœa, as is well known, may be caused by intense fear, and all observers have noticed in cholera epidemics the influence of moral causes, and especially fear, on the increase and course of the disease; the remedy most in repute to check the infection at its birth, laudanum, acts precisely by diminishing the intestinal excitability, by its sedative influence on the innervation. The cold bath, frictions with ice, which are sometimes of undoubted service, act as a shock by exciting the peripheral innervation. Probably the cholera-bacillus stimulates the terminations of the intestinal nerves, either mechanically, or producing, by fermentation of the intestinal contents, an irritating substance of local action. It is well known that slight stimuli, uniformly repeated and lasting, may act by depressing the nervous system in a manner greater than could be suspected, *à priori*, from their apparently small energy. The penetration into the skin of the *Ixodes ricinus* may cause grave collapse, and even death, if the animal be not promptly extracted. The harmlessness of injections into the serous cavities and into the blood-current of watery extracts of the viscera, and of the urine passed after the algide stage, renders it very little probable that the phenomena of cholera are due to the general action of any poison. The cholera-bacillus vegetates in the intestine under the form of the simple comma, or of two united. In conditions most favourable to its development, it may grow into a longer and more complete organism, the cholera-spirillum. The commas multiply either by direct division, or by division of the spirilla into commas. In special conditions, spores are formed both in the commas and in the spirilla. The spores become free by the destruction of the sporifying organisms. Probably the spores constitute the most resisting form of the cholera microbe, and afford the explanation of the permanence of the infection in places where the disease is endemic.

G. D'Arcy Adams, M.D.

Article 3908.

FERRAN ON INOCULATION AGAINST CHOLERA.[*]

The pure cultivation of the cholera-bacillus causes the death of guinea-pigs in the dose of two cubic centimètres by hypodermic injection. Taking a number of inoculated guinea-pigs, and an equal number of non-inoculated, the first die or are rendered very ill, while the second group seem but slightly affected for about two hours. The local action of the anticholeraic matter is limited to a slight tumefaction, which disappears rapidly without ulterior consequence. A drop of blood from an inoculated animal, taken from a spot remote from the site of inoculation, gives the same microbe susceptible of being cultivated in series without losing any of its characters. This happens even if the blood be taken twenty hours after the inoculation. The cultivation-liquid filtered through porcelain (biscuit) communicates no disease capable of being transmitted in series.

Preventive inoculations determine in man the same local symptoms as in guinea-pigs. If experience in an infected locality were to show that inoculation confers the same immunity in man as it does in rabbits, Dr. Ferran affirms that the proceeding is so practical, that in eight hours enough material could be prepared to inoculate a population as large as that of Madrid. In guinea-pigs, complete immunity is obtained in forty-eight hours from the inoculation. He and Pauli have both been inoculated.

Finding that the virulence of the microphyte of cholera progressively and spontaneously diminished, Dr. Ferran ventured to increase the quantity of the cultivation-liquid injected in individuals submitted to its prophylactic action.[†] With the injection of a cubic centimètre of the cultivation endued with the greatest virulence which he was able to obtain, he observed very important phenomena, characterised in some individuals by the appearance in the blood of numberless minute cocci capable of being cultivated, greenish globules, and other amorphous particles, which were apparently the remains of pigmented elements. This infection of the blood only occurred in those individuals in whom the injection gave rise to symptoms, and not in those in whom the effects were localised to the site of injection. The general symptoms were: a more or less accentuated rise of temperature, prostration and abundant diuresis, nausea, vomiting, and chills. Dr. Ferran, trusting to the efficacy of the inoculation to which he had submitted himself, ceased to take in his laboratory any precautions to avoid infection. On Jan. 18 he had two diarrhœal motions, such as might have been caused by a slight purgative, and to which under other circumstances he would not have attributed the least importance. It occurred to him, however, to examine them, when he found that they consisted of a pure cultivation of cholerigenic spirilla and loose commas, which, when cultivated, behaved precisely as the bacilli from cholera patients. Two days later, no traces of the microphytes were to be found in his dejections, nor did they exist in his motions previously. In the diarrhœal dejections he also noticed a few oögonia, oöspheres, and spherical green corpuscles. This infection led to nothing, as the diarrhœa ceased after the second motion without medicine, and, according to the author, would appear to confirm the fact of the immunity from cholera of those inoculated according to his method. G. D'Arcy Adams, M.D.

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[*] Ferran.—Inoculation against Cholera. (*El Siglo Medico*, Dec. 28, 1885.)

[†] Ferran.—Peronospora Ferrani. (*Rev. de Ciencias Medicas*, and *El Siglo Medico*, March 1, 1885.)

Article 3909.

GIMENO AND CARRERAS-SOLÁ ON THE PERONOSPORA FERRANI (COMMA-BACILLUS OF KOCH).

Gimeno and Carreras-Solá contribute to the *Cronica Med.* and *La Rev. de las Ciencias Med.* two important articles on the new phases of the comma-bacillus said to be discovered by Ferran. The comma-bacillus, Gimeno says, does not belong to the schizomycetes. Koch, at the Berlin Conference, suggested that it might turn out to be a spirillum. Ferran now alleges that the comma and the spirillum are not the only forms which the cholera microbe assumes; these forms rather are the first stages of a development which prove it to be an organism superior in organisation to the schizomycetes. The comma-bacillus of Koch is a microscopic plant belonging to the Peronosporeæ, and presenting all the morphological peculiarities of these cryptogams. By means of a special method of cultivation, in seven or eight days all stages of the development of what has hitherto been called the comma-bacillus, but which in future should be called the Peronospora Ferrani, may be obtained. When the comma-bacilli are cultivated, in broth especially, spirilla result. Now, following Ferran's method, a further stage is obtained. After a short time little globular beads appear on the extremities of the spirilla, and sometimes in the substance of one of the spirals; these little spherical bodies are very distinct and announce new forms; little by little the protoplasm of these little bodies becomes contracted, leaving an empty space, granulations appear, some more visible than others. Meanwhile, from the same spirillum, and near the head, which has undergone transformation, a short roundish spur is seen to be thrown out, which gradually tends to approximate itself to the head; at last a moment arrives in which the little sphere breaks and sets at liberty the granulations which, when free, have the appearance and size of blood-corpuscles, being like them lenticular, but are to be distinguished by being greenish from the presence of chlorophyll. These greenish bodies, which Gimeno says he has been able to observe very clearly in the blood-serum of an inoculated rabbit a few hours after death, continue to increase in size and to change in form and transparency, becoming in a few hours more voluminous and granular, but preserving their green colour. If these spherical bodies be watched continuously under the microscope, a very curious and remarkable spectacle is seen. An almost imperceptible internal movement of their protoplasm agitates them momentarily; and suddenly, as if the protoplasm was compressed by its envelope and forced to escape through a small opening in it, one sees come out a slender, long transparent thread of undecided contour, which sometimes crosses in a flexuous and irregular direction the whole field of the microscope, and which, in contact with the ambient medium, in a short space of time becomes condensed, and commences to take the spiral form; at length, separating itself from its green envelope, which it abandons as an useless broken shell, it floats an independent spirillum, endued with the prodigious activity of these little organisms. The segmentation of these spirilla gives rise to the new comma-bacilli. The development is thus completed and the morphological cycle complete. The cholera microbe must be included in the family to which belong the *cystopus candidus* of the Cruciferæ and the *ronospora infestans* of the potato. 'Who cannot but see in the little spherical heads which appear primarily on the spirilla true *oögonia* described and named by Pringsheim in the *saprolignia monoica*? and who can then doubt as to the existence of oöspheres and oöspores, and can fail to recognise in the spur which is developed close to the *oögonium*, the masculine element, the true *antheridium* which is to fecundate it? The cholera microbe, therefore, is a peronospora.'

Carreras-Solá thus describes the method of cultivation employed by Ferran. The best medium of cultivation is good meat-broth, carefully sterilised, to which has been added a little human or pig's bile, and which has been rendered alkaline with caustic soda. The flask should only be a sixth part full. It is inoculated and kept at a temperature of 37° C. (98°·6 F.). When the broth becomes turbid, it is to be left in incubation for two hours more, and then is added, with due precautions, an equal quantity of well sterilised broth prepared as the first; it must then be kept in a temperature of 15° C. (59° F.), taking care to neutralise the markedly acid reaction which the life of the microbe communicates to the liquid. Under these conditions the scissiparous generation is considerably checked, and, thanks to the nutritive elements of the medium, the existing filaments grow strongly and give rise to numerous oögonia, which follow the cycle described without hindrance, unless before the completion of the cycle the broth become exhausted of assimilable principles. If the incubation were made at a relatively high temperature, scissiparous reproduction would be so active that, long before oögonia could arise, the nutritive materials of the broth would be exhausted. In nature the same thing happens, although in a different manner. This microphyte vegetates without doubt in moist earth and mud, and amongst the cryptogamic vegetations of the banks and bottoms of ponds and rivers. In the first place, the medium being great and constantly renewed, the plant has always more than enough oxygen and organic material to sustain life. On the other hand, the products of its denutrition being extraordinarily diluted, it is not disturbed by them, which otherwise would seriously oppose its development. Placed in these conditions, and provided the temperature be not too low, it can in a few hours give origin to an infinite number of oöspheres replete with comma-bacilli producing granulations, so small at first as to pass through porcelain filters (biscuit), when new, and at a pressure of less than a column of 10 mètres. Two drops of the cultivation-fluid, filtered through one of these apparatus, infect in forty-eight hours a tube of broth submitted to a temperature of 37° C., giving rise to characteristic spirilla. The influence of low temperatures paralyses the work of segmentation, but the filaments or spirals already formed, being still nourished, engender oögonia which, even at these temperatures, are converted into oöspheres with granulations which are transformed into comma-bearing muriform bodies, which thus complete the circle of evolution.

G. D'Arcy Adams, M.D.

Article 3910.

HUTCHISON ON EXTRACAPSULAR FRACTURE OF THE NECK OF THE THIGH BONE.

In the *Medical News* of December 13, 1884, is a report of an interesting case of extracapsular fracture of the neck of the thigh bone, read at the New York Surgical Society by Dr. Joseph C. Hutchison. A patient, a medical man, aged 56, and of considerable weight, was on August 31 thrown violently from an overturned carriage. Immediately after the accident he walked, with a little assistance, five or six steps. He suffered deep-seated and severe pain in the right trochanter major, which had received the force of the blow. After he had been put to bed it was found, on careful examination by Professor F. H. Hamilton and two other medical men, that there was no eversion of the limb, and that the foot could be inverted by the patient to a moderate degree. The skin was contused directly over the outer side of the trochanter, and an absence of bruises at any other part of the surface proved that this process had received the full force of the fall. No manipulation was made for the purpose of detecting crepitus. The patient could not raise the heel from the bed, but was able to flex the thigh slightly upon the pelvis by bending the knee-joint. On the following day Dr. Hamilton observed depression of the right trochanter, and an unnatural fulness in the inguinal region, which, with the development of muscular twitchings during the night about the seat of the injury, in addition to the signs previously mentioned, convinced him that there was an impacted extracapsular fracture. According to Dr. Hamilton, muscular spasm in this region, after a recent injury, is generally pathognomonic of fracture of the cervix femoris. On the next day the patient was removed to his home, which was two hundred miles distant. No apparatus was applied, as the surgical knowledge of the patient induced him to keep the limb quiet during the journey. He was carried from the hotel to the station on an improvised stretcher, and travelled by train in a private car in which he lay on a spring mattress, being turned upon his injured side, so that the trochanter major was well pressed upon. At the end of his railway journey, he was removed to his home in an ambulance. The injured limb was treated for three days by lateral pressure against the trochanter by means of a heavy bag of sand, and application of a suspended weight to the leg, not for extension, but to steady the limb and to relieve muscular spasm. Afterwards, Halsted's modified form of Volkmann's splint was applied. Towards the end of the third week, a marked painless swelling, unmistakably callus, was noticed in the groin, just outside the femoral vessels, which disappeared in due time. The patient got out of bed on the forty-second day, moved about on crutches on the following day, and was able to walk without a stick on the eighty-fourth day. Eleven months after the injury there was nothing to indicate that the patient had had a fracture of the femur, except diminished prominence of the trochanter major, flattening of the corresponding side of the nates, and an unnatural fulness in the inguinal region. There was no limp, and the motions of the joint were perfect.

In this case, Dr. Hutchison points out, two of the most important signs of fracture of the neck of the femur, whether impacted or not, were absent. There was no pain on pressure over the trochanter, and no eversion of the limb. Outward rotation of the limb, in this class of injury, is the rule, but exceptional cases have been recorded in which the limb was inverted, or the position of the foot was normal. The position depends upon the direction of the fracturing force. When this is applied directly upon the outer surface of the trochanter in the direction of the axis of the neck, as in the case here reported, the whole base of the cervix is implanted into the trochanteric portion of the femur, and the limb will retain its natural position. In considering whether this was a case of fracture or of some injury which did not involve the integrity of the bone, Dr. Hutchison alludes to the difficulty that sometimes attends the diagnosis of fracture of the neck of the femur, and to the facts that most of the symptoms of fracture may be present in cases in which the neck of the femur is uninjured, and, on the other hand, that fracture may be unaccompanied at first by the more important of the usual diagnostic signs. In the case under consideration the pathognomonic symptoms of fracture were, firstly, depression of the trochanter major on the injured side; secondly, the spasms or twitchings in the muscles surrounding the joint during sleep; and, thirdly, the deposit of callus, towards the end of the third week, in the groin, on the outer side of the femoral vessels, and just below Poupart's ligament.

In the treatment of any case of suspected impacted fracture of the neck of the femur, the most important point, Dr. Hutchison asserts, is to maintain the impaction. The surgeon should not incur the risk of damaging his patient by instituting any examination in order to produce crepitus, and it is better that malposition of the limb should not be corrected, than that impaction should be broken up by unwarrantable manipulation and the union of the fragments thereby endangered. The most suitable treatment consists in keeping the patient at rest, in avoiding undue manipulations, in moderate extension in the straight position in order to steady the limb, and in applying lateral pressure over the trochanter by means of a sandbag or of a long external splint, or by the use of Volkmann's splint. Violent extension would disengage and displace the impacted fragments, and so make non-union almost inevitable. W. Johnson Smith.

Article 3911.

MAAS ON AUTOPLASTY BY THE TRANSPLANTATION OF A PARTLY ATTACHED FLAP FROM ANOTHER REGION.

In the *Archiv für Klin. Chirurgie*, Band xxxi., Heft 3, Professor H. Maas, of Wurzburg, has published several cases to prove that fresh flaps, retained only by a pedicle, may be successfully applied to some other contiguous or approximated parts of the surface of the body, if certain rules be observed during the operation. The part from which the flap is taken should be secured, as far as possible, in one position near the defect or ulcer over which the flap is to be applied, by means of a gypsum bandage. In the case of the lower extremity, the region usually operated on, great care should be taken to find the easiest position for both limbs. As a rule, the patient will most readily tolerate recumbency on the side, with the knee and hip bent. Each limb should be enclosed in a special gypsum-bandage, and the two be then fixed together by a third bandage. This method of keeping both parts at rest and mutually fixed should also be applied in cases where a flap is transplanted to the upper extremity from the front of the chest or abdomen. The author would enclose the arm in a gypsum-bandage, and then, before proceeding to the plastic operation, would fix it by another bandage to the side of the body.

In converting an ulcer into a fresh wound for the reception of the flap, the superficial layer of soft tissue, representing the special granulation-layer, should, Dr. Maas states, be carefully dissected away. It is unnecessary to retain any portion beyond the deep layer of firm connective tissue. In mapping out the flap for covering this prepared surface, care should be taken that the large cutaneous vessels run directly in its long axis, or from its attached portion to its opposite free extremity. This point should be attended to even though the situation of the flap, thus formed, necessitate on transposition some twisting of its pedicle or of the main portion of the flap. The edges of the flap should be fixed as closely as possible to the margins of the raw and prepared defect, by sutures of Lister's chromicised catgut that has been kept for some days in a solution of corrosive sublimate (1 to 1,000). These sutures hold well for a time and are yet flexible, and resist absorption during ten or twelve days. It is of special importance to guard against desiccation and shrivelling of the flap, and consequent necrosis and probably septic absorption. Both the flap and the fresh open surface from which it has been taken should be protected by a layer of antiseptic gauze, thickly spread over with boracic acid salve. The plastic proceeding should, Dr. Maas asserts, be performed under antiseptic conditions, and the seat of operation be subsequently covered by some antiseptic dressing. Dr. Maas prefers a dressing which contains corrosive sublimate in very small proportion. This not only prevents septic mischief, but is less likely than most other forms of antiseptic applications to create such mechanical irritation as might endanger the vitality or interfere with the lesion of the flap. With regard to the time for dividing the pedicle, it has been found, Dr. Maas states, that this may be safely done in from ten to fourteen days after the operation. If the patient be very restless and uneasy, the pedicle might be completely divided as early as the seventh day; but such a course, it is held, exposes the flap to the danger of sloughing.

From observations made after operations performed by Dr. Maas and others, the tests of cutaneous sensibility prove that the transplanted flap is speedily put into nervous communication with the surrounding skin. In a brief course of time, the union of the flap to the structures of the surface and margins of its new bed is so complete, that with regard to tactile sensibility there is no difference between the transplanted skin and that of the corresponding of the opposite limb. The great advantage of autoplastic operations of the above kind consists, Dr. Maas points out, in the substitution of an obstinate ulcer or a distorting and crippling cicatrix by a flap of normal sound and elastic skin.

W. Johnson Smith.

Article 3912.

BERGER ON COMPLICATED LUXATIONS AT THE SHOULDER-JOINT.

M. Paul Berger, of Paris, surgeon to the Hospice de Bicêtre, has recently re-published in a pamphlet (A. Delahaye and E. Lecrosnier) some contributions to the *France Médicale* (Nos. 132, 133, 134) on luxations at the shoulder complicated by fracture near the upper extremity of the humerus. Three cases of this form of injury are here reported, in order to direct attention to some of the characters which may enable the surgeon to establish his diagnosis, and to the best means of overcoming the difficulties in treatment. With regard to the diagnosis, it is stated that when, in presence of the usual signs of displacement of the head of the humerus, the separation of the elbow from the trunk may be readily corrected, and the arm be placed parallel to the axis of the body, and be maintained in this position; when movements communicated to the dislocated member, although very painful, may be executed without any feeling of resistance, it may be almost positively asserted that there is fracture as well as luxation. This opinion would be confirmed by shortening of the limb, by the absence of vertical elongation of the anterior wall of the axilla, by excessive effusion of blood, evidenced by considerable ecchymosis along the inner surface of the limb extending to the elbow, and sometimes to the forearm, and by crepitus. Ecchymosis, however, is but a late sign, and crepitus may fail. In cases of decided fracture of the humerus near its upper extremity, when the most apparent signs of luxation are concealed, in consequence of the swelling of the soft parts, observation of the existence of subacromial depression of the point of the shoulder, and of the presence of the head of the humerus in the axilla, will permit the surgeon to diagnose the double lesion.

A complicated luxation having been recognised, the treatment should consist in first reducing the articular displacement, and next fixing the fracture in a good position. M. Berger, though admitting the dangers of extension of the limb in attempting reduction, holds that this proceeding is sometimes necessary in order to bring downwards into the axilla the head of the humerus, when it is displaced beneath or to the inner side of the coracoid process. In two of the three reported cases, it was found impossible to act in any other way on the displaced articular extremity. Carefully applied traction of the upper limb may be transmitted to the head of the humerus by the remains of periosteum, of capsular ligament, or of muscles, and bring it under the influence of more direct manipulation, by which it may be forced into its articular cavity.

In cases of failure to effect immediate reduction, notwithstanding all necessary care and perseverance, and in cases also of relapsing luxation after complete reduction, M. Berger would not, as a rule, make a subsequent attempt to replace the head of the humerus after consolidation of the fracture, but would endeavour, by placing the limb in the best possible position, and by exercising such movements as the new joint might acquire, to seek such functional result as might compensate to a certain extent for the want of success in the operative treatment. What chances are there, he asks, of obtaining reduction after an interval of some weeks, when the best-directed efforts, made immediately after the production of the luxation, have failed? Such proceeding might be attended with danger, and inflammation be set up at the seat of injury, or the callus might be broken down, or some serious injury inflicted on the brachial plexus, or on the axillary artery or vein. M. Berger would maintain the limb at perfect rest until complete consolidation of the fracture has been effected, and is strongly opposed to any attempt to establish a false joint between the fragments of the humerus by early movements of the arm. Such an attempt must be attended with some risk, and a pseudarthrosis is very rarely formed after a fracture near the extremity of a long bone. The prognosis of unreduced luxation, complicated by fracture of the humerus, is considered to be better than that of unreduced simple luxation. In the treatment of the former injury, the fracture allows the arm to be placed parallel to the trunk. The hindrance that results from the separation of the elbow is thus suppressed, and the patient, though the range of muscular action in the injured limb has been much restricted, is able to carry his hand to the face, the head, the opposite shoulder, and even behind the back.

W. Johnson Smith.

Article 3913.

CHARCOT ON THE NOSOGRAPHICAL REVISION OF PROGRESSIVE MUSCULAR ATROPHIES.

M. Charcot (*Le Progrès Méd.*, No. 10, 1885) says that ten years ago he divided progressive muscular atrophy, which is a purely clinical term, into two fundamental groups: 1, *deuteropathic* spinal amyotrophy, in which the lesion of the grey matter is secondary; and, 2, *protopathic* spinal amyotrophy, in which the lesion of the grey matter is the sole condition, or, at least, is primary and fundamental.

In the first group are those cases in which the affection of the grey matter is part of some well-defined lesion, such as diffuse myelitis, tumours of the spinal cord, insular sclerosis, locomotor ataxy, &c., which may be easily eliminated by other characteristic features; and those in which the antero-lateral columns are first affected, and the grey matter secondarily — amyotrophic lateral sclerosis, when, in addition to the muscular atrophy, there is also spastic rigidity. The second group he proposed to term clinically progressive muscular atrophy, of the type Duchenne-Aran. There the lesion of the motor nuclei of the spinal cord and medulla oblongata is the sole or primary condition. It is this group which has recently been criticised. There is no doubt of the existence of this form, characterised by its late onset, after twenty years of age, by its first attacking the upper extremities, especially the thenar and hypothenar eminences, and by spreading upwards to the root of the limbs. Fibrillar twitching and the reaction of degeneration are present in the muscles. But it must be admitted that there are forms of progressive muscular atrophy which are independent of any lesion of the nerve-centres or peripheral nerves, a view sustained by Eulenburg and Cohnheim in 1866, and by Charcot himself in 1871; he at that time protested against the tendency to ascribe all forms of progressive muscular atrophy to lesions of the nerve-centres.

The first example of this form is pseudo-hypertrophic paralysis.

The second is that form described by Erb as juvenile progressive muscular atrophy (*Deutsches Archiv*, 1884). It presents analogies with pseudo-hypertrophic paralysis, but begins usually at about twenty years of age, rarely in infancy, affecting principally the muscles of the shoulder-girdle, never the thenar and hypothenar muscles; but the lower extremities may be attacked in their turn. Atrophy of muscles is the rule, hypertrophy is rare; there is no fibrillar twitching, the muscles do not show the reaction of degeneration, and there is no spinal lesion.

An example of yet another form was shown by M. Charcot, which he said stood midway between the last and pseudo-hypertrophic paralysis. There was neither atrophy nor hypertrophy, muscular weakness being the principal feature; yet, apart from the absence of enlargement of the muscles, it presented all the characters of pseudo-hypertrophic paralysis.

Again, another example also shown to the class was a girl 24 years of age, presenting muscular atrophy of the legs and some weakness of the arms, with a little flattening of the thenar and hypothenar eminences. There was no heredity, yet it resembled the hereditary forms described by Professor Leyden, of which one peculiarity is its commencement in the lower limbs, nor did it differ very much from the juvenile form described by Erb.

Finally, there is another type described by Duchenne, which he called an infantile form of progressive muscular atrophy, which commences in the face, especially in the orbicularis oris, giving rise to a characteristic pouting of the lips. This form is hereditary; and M. Charcot showed a girl aged 16, and her father aged 44, both presenting this peculiarity. Besides the affection of the lips, the eyes could not be completely closed, and frowning and raising the eyebrows were impossible, while the muscles of the arms were much atrophied. At the same time, the tongue and the muscles of deglutition were intact; in fact, all symptoms of affection of the medulla were absent.

M. Remak has recorded a case in which the affection began in the arms and attacked the face later, while Zimmerlin has recorded three cases in one family of Erb's infantile muscular atrophy, in two of which the upper limbs were first attacked, while the third began in the face with pseudo-hypertrophy of the lower limbs.

Therefore, the commencement in the face cannot be regarded as a specific characteristic, but solely indicates a variety.

M. Charcot now proposes the following classification.

Class 1.—Amyotrophy of spinal origin.
a. Amyotrophic lateral sclerosis.
b. Progressive muscular atrophy of the type Duchenne-Aran.

Class 2.—Primary progressive amyotrophy.
a. Pseudo-hypertrophic paralysis.
b. Erb's juvenile progressive muscular atrophy.
c. Duchenne's infantile progressive muscular atrophy.
d. Transitional forms, with muscular weakness, but presenting neither hypertrophy nor atrophy.
e. Leyden's hereditary form of progressive muscular atrophy.

The existence of transitional or mixed forms prevents the confusion of these different types, but all may be united under the group of *primary progressive amyotrophy.*

Robert Saundby, M.D.

Article 3914.

LÜRMAN ON AN EPIDEMIC OF JAUNDICE.

Dr. Lürman, of Bremen, reports an interesting account of an epidemic of jaundice in that town, in the *Berlin. Klin. Wochensch.*, No. 2. The outbreak, which lasted from Oct. 1883 to April 1884, occurred in a large ship-building and machine-making establishment in Bremen, on the bank of the Weser. Between 1,200 and 1,500 persons were employed, of whom only a few took their meals in adjoining canteens, while the rest either went home for their food or brought it with them. The subjacent soil was sandy; no structural alterations had been made in the buildings for two years—at least to a very slight extent; phosphorus was not used in the factory. A small stream joining the Weser here furnished the drinking water, which was repeatedly examined without finding anything wrong. No such epidemic had occurred here before. In the end of October 1883, the first case of catarrhal icterus presented itself. By the end of November there were 33 such cases; 137 more were attacked in December, in January 1884 14, in February and March 5, and in April 2. The whole number was thus 191, besides several cases which did not come under observation. During this period a few scattered cases occurred in the town, but not an extraordinary number for the time of year. The jaundice attacked masters, clerks, and workers indifferently. The disease began with the symptoms of gastric or gastric and intestinal catarrh, which persisted a week or more till jaundice appeared. The symptoms were epigastric oppression and fulness, anorexia, vomiting, faintness, &c.; there was usually constipation. Yellow vision only occurred in a few cases. The constipation was often succeeded by sharp diarrhœa when jaundice appeared. Physical examination showed a prominent and tender epigastrium, but no distinct enlargement of the liver was ever found, nor was the gall-bladder ever felt as a tumour. The whole process was a-febrile; the pulse was often retarded. The fæces were always very pale at first, but soon became normal again in spite of existing or increasing icterus of the skin and conjunctivæ. Albumen was never found in the urine, nor biliary acids, while biliary colouring matters were easily shown by Gmelin's test. Cholæmia only occurred in one case (cerebral symptoms, general dropsy with deficient urine, ultimate cure), and not one death took place.

Etiologically considered, no cause could be assigned, malarial or otherwise. A neighbouring factory of 600 persons entirely escaped. Even bad or defective diet must be excluded, as no cases occurred amongst the wives and children of the men. As to the water, many never partook of the stream, but brought coffee with them. But a very curious connection was found to exist between the occurrence of the epidemic, and the fact that nearly all the persons in the establishment had been re-vaccinated in August 1883. This occurred in three separate parts of the factory, which we will call A, B, and C. In A, 540 persons were vaccinated, 141 of whom had jaundice subsequently; in B, 466 persons were vaccinated, 35 of whom had jaundice; in C, 283 persons were vaccinated, 14 of whom had jaundice; afterwards 50 persons were vaccinated, 1 of whom had jaundice. Of 500 persons taken on at the work after this re-vaccination, not one suffered from jaundice. Again, 87 persons were vaccinated by other surgeons and with other lymph; of these not one suffered from jaundice. The re-vaccination was without effect in the majority of the cases, but its success or not was without influence on the jaundice.

In conclusion, the above epidemic was evidently an infectious disease, the virus of which was strictly limited both as to place and time, with a very long incubation period of two to eight months, and was causally connected with the re-vaccination, in some way or other.
E. J. Edwardes, M.D.

Article 3915.

SUTUGIN AND JDANOVA ON ACUTE ATROPHY OF THE LIVER IN PREGNANCY.

In the *Vratch*, Nos. 19 and 20, 1884, Professor V. V. Sutugin,[*] of St. Petersburg, describes two cases of acute atrophy of the liver in pregnant women. The first of the patients, a cook, aged 24, previously healthy, in the beginning of the tenth month of her third pregnancy suddenly was taken ill with malaise, fever, severe headache, and slight gastric symptoms. On the fifth day of the disease, the patient was delivered of a live and healthy boy. On the sixth day there appeared delirium, general excitement, fibrillary twitchings in the facial muscles, and slight jaundice. On the seventh day jaundice markedly deepened, and there was constant bilious vomiting, with admixture of blood, severe trismus, eclamptoid clonic movements in the limbs, loss of consciousness, tympanites, and immobility of the pupils. The pulse was 196. Percussion along the right mammillary line detected only hardly perceptible dulness at the level of the seventh rib; the hepatic dulness at the level of the eighth rib along the axillary line was found slightly deeper than in front. The uterus was well contracted; there were symptoms of puerperal endometritis. The urine contained bile and albumen. In the evening of the seventh day of her disease the patient died. At the necropsy there were found icteric discoloration of the integuments, dura mater, and endocardium; congestion of the pia mater; an accumulation of serous fluid in the cerebral ventricles; small ecchymoses in the pericardium; softness of the cardiac muscle, paleness of the kidneys, and grey discoloration of the uterine mucous membrane. The liver was very small, flattened, of a canary-yellow colour, and presented small accumulations of pigment scattered all over the surface of the section.

The second patient, a lady, aged 19, previously healthy, in the seventh month of her third pregnancy began to complain of epigastric pain. Six days later jaundice supervened. On the seventh day from the first symptoms, the patient was delivered of a dead macerated fœtus. On the tenth day delirium and clonic convulsions appeared, to which, on the eleventh day, loss of consciousness, slight fever (38° C.) and stertorous breathing were added. There were present, also, dilatation of the pupils, anæsthesia of the conjunctivæ and integuments, tympanites, and abdominal tenderness; the pulse was easily compressible (120). Percussion gave the same results as in the first case. The urine contained bile, albumen, peptones, and considerable quantities of leucin, tyrosin, and ptomaines; the quantity of urea, however, was normal (43·36 per 1,000). On the thirteenth day there appeared hiccough, and incontinence of urine, and in the night the patient died in a comatose state. The temperature after the labour oscillated between 36°·7 and 38° C. The *post mortem* examination showed an intense icteric discoloration of the integuments, and of the sclerotics and cortical substance of the kidneys; dilatation, flabbiness, and greyish discoloration of the cardiac muscle; slight diminution of the spleen; and endometritis. The liver was considerably diminished in bulk, weighed 19 ounces, and had an orange colour. On microscopic examination, sections (both from the right and left lobes) showed universal disintegration of the liver-cells, which had the appearance of small granular spheres scattered in disorder amongst amorphous granular *débris*. The granular substance consisted partly of fat, partly of brown-yellow pigment.

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[*] Sutugin, Professor V. V..—On Acute Atrophy of the Liver in Pregnancy. (*Vratch*, 1884, No. 19, pp. 313-15; and No. 20 pp. 336-38.)

In both of the cases idiopathic (or essential) acute atrophy of the liver was recognised by the author during the patient's life. He gives a detailed exposition of the grounds on which he was able to distinguish the disease from eclampsia, puerperal fever (septicæmia), catarrhal jaundice, cerebral affections, and acute poisoning by phosphorus. Endometritis, which was present in both of the cases, is considered by the author as a secondary phenomenon. Professor Sutugin is inclined in favour of the infectious character of the disease, and, accordingly, advises a trial of the administration of benzoin, thymol, and other antiseptics.

In the *Russkaia Meditzina*, Nos. 11 and 12, 1884, Dr. A. N. Jdanova[*] details a case of acute atrophy of the liver which came under her observation in Professor K. F. Slaviansky's clinic, in St. Petersburg. The patient, a peasant, aged 24, previously healthy, in the eighth month of her first pregnancy was suddenly attacked with malaise and gastric disturbance. On the next day she began to vomit. On the fourth day of the illness she was admitted to the hospital, when, twenty minutes later, she was delivered of a dead fœtus. On examining the patient there were found jaundice, diminution in bulk of the liver (the sharp edge of which was felt by the author under the ribs), and apathy. On the fifth day apathy deepened into a comatose state; the uterus increased, and the breathing became stertorous. The urine contained bile, albumen, and a number of epithelial casts. Its daily quantity was 1,950 cubic centimètres; the specific gravity was 1015; the quantity of urea was 24·375 grammes (1·25 per cent.). The patient died in the afternoon of the fifth day. At the necropsy there were found icteric discoloration of the skin, extravasations in the pericardium and pleuræ, flabbiness, paleness, and thinness of the cardiac muscle, yellow staining of the endocardium and intima of the aorta, hyperæmia and œdema of the lungs, paleness and flabbiness of the spleen; anæmia of the kidneys, with icteric discoloration of the cortical substance, and fresh extravasations in the mucous membrane of the renal pelvis; flabbiness, paleness, and yellow staining of the muscular wall of the uterus; and considerable flabbiness of the pancreas. The liver weighed 875 grammes. Its transverse diameter was 9½ inches; the longitudinal of the right lobe was 6 inches, of the left 5 inches; the thickness of the right lobe was 1″6 ‴; of the left, 1″ 3‴. Its tissue was very flabby, of a brown-yellow colour. On microscopic examination, the liver presented a mass of fatty *débris*; the cardiac muscle, kidneys, and spleen were also found in a high degree of fatty degeneration.

Dr. Jdanova's case of acute atrophy of the liver in pregnancy is only the second observed during the last six years amongst 1,500 patients admitted to Professor Slaviansky's clinic.

Cases of acute atrophy of the liver in pregnant women have been reported also by the following Russian observers. 1. H. Rodzewicz, of Nijni-Novgorod, in the *Vracheb. Vedom.*, No. 30, 1883, p. 4213. The patient, aged 27, was taken ill in the middle of the ninth month of her second pregnancy. On the third day of the disease she was delivered of a sickly child, which lived only a few hours; she died six days later. 2. A. J. Lanz, in the *Meditz. Obozr.*, May 1882, p. 675. The patient, aged 29, fell ill in the eighth month of her fourth pregnancy. On the seventh day she was delivered of a weak child, which soon died; herself died on the ninth day of the disease. 3. Dr. Weber, in the *Allgem. Med. Centralbl.*, 1876, and *St. Petersburg Med. Wochensch.*, No. 36, 1878, reports two cases: one in the seventh month of the fourteenth pregnancy, with lethal issue, and another in the eighth month of the eighth pregnancy, with abortion, but ending in recovery. 4. J. M. Tarnovsky, in the *Voenno-Meditz. Jurnal*, Feb. 1874, p. 136. One fatal case. 5. Erichsen reports one fatal case, quoted in Thierfelder's paper in Ziemssen's *Handbook*, vol. viii., part 1. 6. Hugenberger relates one fatal case. *Ibidem.* 7. J. N. Grammatikaty, in the *Ejened. Klin. Gazeta*, No. 24, 1881, p. 228. The patient, aged 22, was taken ill in the eighth month of pregnancy; the labour came on the third day of grave jaundice; from the sixth day of the disease the improvement began, and the patient recovered.

[We may as well mention here cases of acute atrophy of the liver in non-gravid women and in men, published by the Russian observers. 1. N. E. Florentinsky saw eleven cases. Six of them may be found in his Inaugural Dissertation (Moscow, 1860); all in males, aged between 12 and 46, with fatal issue. Three other cases are mentioned in Rodzewicz's article on the subject in the *Vracheb. Vedom.*, No. 29, 1883, p. 4184; they concern two males and one female, with one death and two recoveries. The remaining two (one fatal, one ending in recovery) were published in the *Vracheb. Vedom.*, No. 434, 1880. 2. F. J. Pasternacki, in the *Vratch*, No. 33, 1882, p. 543. One fatal male case. 3. Lewicki and Brodowski, in Virchow's *Archiv*, vol. lxx., p. 421. One fatal male case. 4. Kittner. A fatal case quoted in Ziemssen's *Handbook*, *l. c.* 5. Hermann. Ditto, *ib.* 6. J. J. Maximovitch and A. F. Wigandt, in the *Vratch*, No. 6, 1882. A fatal male case. 7. P. J. Kubasoff, *St. Petersburg Inaugural Dissertation*, 1883. A fatal female case. 8. T. M. Lvoff. A fatal case quoted in Rodzewicz's article in the *Vracheb. Vedom.*, No. 29, 1883, p. 4193 9. A. N. Alalekoff, *Vracheb. Vedom.*, No. 313, 1882, p. 3064. Two fatal male cases. 10. H. Rodzewicz, *l. c.* One fatal female case. 11. D. Skolozuboff, in the *Moskovsk. Meditz. Gazeta*, Nos. 49 and 50, 1873. Two fatal (one male, another female) cases. 12. Sunblatt, a fatal case, in the *Proceedings of the Tambov Medical Society*, 1884, No. 3.—*Rep.*]

V. IDELSON, M.D.

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[*] JDANOVA, A. N.—On Acute Yellow Atrophy of the Liver in Pregnancy. (*Russkaia Meditsina*, 1884, No. 11, pp. 251-52; and No. 12, pp. 274-76.

Article 3916.

MOSETIG-MOORHOF ON IODOFORM DRESSINGS.

In No. 4 of *Der Fortschritt* (Geneva, Feb. 26), Professor Mosetig-Moorhof, of Vienna, states that, having used exclusively iodoform as an antiseptic in his hospital, out-door, and private practice during the last five years, he never observed a single case of poisoning. He explains this immunity by his always using iodoform alone, without any other antiseptic. Cases of poisoning, as he observes, only occurred when other antiseptic preparations had been applied besides the iodoform, a point on which he lays great stress. Moreover, he uses only a small quantity of chemically perfectly pure iodoform, which, as a rule, is only once applied, and he changes the dressing as rarely as possible.

The preparations of iodoform in use in the practice of Professor Mosetig-Moorhof are :—

1. Pure, finely pulverised iodoform, applied generally by means of an insufflator or a common dredging-box, in order to cover the whole wound with an equally spread film.

2. Iodoform pencils, either elastic or rigid. The former are made with gelatine, the others with gum or butter of cocoa. They serve for the introduction of the drug into sinuses and fistulas, the orifices of which have to be kept open by a short drainage-tube, in order that the channel may heal from inside outwards, and that no secretion be retained.

3. Iodoform gauze, prepared of ordinary gauze with a 10 to 50 per cent. solution of iodoform in ether, without addition of any adhesive material. It is used for ordinary dressing purposes, and for plugging wounds in case of hæmorrhage, especially in the mouth, in the rectum, and of the female genital organs.

4. An emulsion, consisting of 10 to 50 per cent. of iodoform, equal parts of glycerine and water, and 0·25 per cent. of gum tragacanth. It is applied to wounds in cavities, where the iodoform will precipitate and form an equal layer, and for injections. Professor Mosetig-Moorhof uses the emulsion in compound fractures, in wounds of the joints, and in chronic abscesses.

5. A solution of iodoform :

℞ Iodoform, ℈j. (1·00); benzol. ℥ij. ℈ij. (9·0); vaseline, ℥iij. ℈j. (11·0); ol. gaultheriae,* ♏ij., for injections in parenchymatous struma and in lymphatic glands, as long as there is no cheesy degeneration.

Professor Mosetig-Moorhof goes on to say that, having frequently observed that fungous granulations after a single application of iodoform, without having been previously destroyed by other means, changed into a healthy granulating surface, that large tuberculous abscesses and tuberculous synovitis rapidly healed by the local use of iodoform, he feels justified in asserting that by the local influence of iodoform circumscribed tuberculous processes may be treated more easily, more rapidly, and with greater certainty than by any other remedy. Iodoform, according to Marchand's investigations, prevents the formation of giant-cells, which are pathognostic in tuberculosis. Iodoform is very valuable for its anodyne properties, especially in burns. The injured parts are covered with a double layer of iodoform gauze, soaked in a mixture of one part of glycerine and three parts of water, a thick layer of cotton-wool, and a cover of gutta-percha tissue complete the dressing.

Cases of erysipelas after operations have not been more frequent under the iodoform treatment in Professor Mosetig-Moorhof's hospital than formerly under Lister's method. Septicæmia has never been observed.

Professor Mosetig-Moorhof concludes with the remark that, far from considering iodoform the most powerful antiseptic, he prefers it, taught by an extensive experience, for being the most reliable and in its action most durable preparation, and at the same time for being most conveniently and easily applied. F. A. Junker, M.D.

Article 3917.

VAILLANT ON SIMABA CEDRON, A REMEDY AGAINST HYDROPHOBIA.

Dr. George Vaillant, of New York, recommends (*Der Fortschritt*, Geneva, March 5, 1885, No. 5) the Simaba Cedron as a remedy for hydrophobia. It is the seed of a fruit of a small tree, resembling the almond-tree, indigenous in South America, and belonging to the natural order of the Simarubiaceæ. Every part of the tree contains a bitter substance, but most particularly the seed, which therefore is exclusively used for therapeutical purposes. The seed is of the size of that of Anacardium (cashew-nut), at one side convex, at the other flat or slightly concave ; it is of blackish colour, rough, hard and resistant, but can be cut with a sharp knife. Its section is yellow, of metallic lustre, and, when chopped or pounded, odourless and of extremely bitter taste. It contains a crystalline intensely bitter principle, the 'cedron,' which is soluble in boiling water and of neutral reaction.

Hunters and trappers in California and in the South-West of America use the seed as an antidote against the bite of the crotalus and other poisonous snakes, for which purpose they steep the shavings of the seed in whiskey, place them on the wound, and chew a small portion of this remedy. It appears to have a neutralising effect on animal poisons, and has proved beneficial in a number of cases of hydrophobia, in which, besides other well-marked symptoms of the disease, convulsions had already reached great intensity.

About three years ago, Dr. Vaillant was called to see a boy, who, three weeks previously, had been bitten by a mad dog. The patient was in great agony, screaming and howling. It was an indubitable case of hydrophobia. Dr. Vaillant administered about one drachm of cedron, partly by the mouth, partly by subcutaneous injection. After twenty-four minutes, the patient became quieter, and after one hour the most prominent symptoms had disappeared. On the following day the boy was quite conscious and composed, and free from nervous exhaustion. On carefully examining the body on the third day, a large phagedæna was discovered, from which thin ropy yellow pus, of extremely offensive smell, was oozing. The patient recovered after one week's treatment, and had no relapse since.

Dr. Vaillant inoculated with the pus, taken from the boy's ulcer, a large tom-cat, at 3 P.M.; soon afterwards the most violent symptoms of hydrophobia appeared, continuing until 4.30 A.M. of the following day, when the animal died. He watched the experiment from the beginning to the end.

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* Gaultheria procumbens, wintergreen or checkerberry.

He further reports a case, to which he was called in consultation at Saratoga. A young lady had been bitten by her pet dog five months previously. His diagnosis of hydrophobia confirmed the opinion of his five colleagues, who attended the case. As he was not able to administer the cedron by the mouth, it was given in subcutaneous injection. Complete recovery was the result.

F. A. JUNKER, M.D.

ARTICLE 3918.

CAMERER ON ASSIMILATION IN INFANTS.

THE author contributes to the *Journal für Kinderheilkunde* (Band xxii., Heft 2) a thoughtful article on this subject. He points out that, in comparing the weight of an infant at different times, there are many fallacies to be guarded against. First, the intestinal contents vary very much, and must be allowed for. Secondly, the interstitial water is subject to great fluctuations; it may be much below normal, owing to a single large watery evacuation, or, on the other hand, much increased by a copious drink. Further, the deposition of fat should not be regarded as true growth. A child's weight, as might be expected, is lowest in the morning, fasting; it afterwards gradually increases, and reaches its maximum in the evening after the last meal. It must not be forgotten that a very slight cause is sufficient to diminish the weight of an infant at the breast; such as prolonged exposure in the open air, slight malaise, teething, and any digestive disturbance such as that produced by the menstruation of the mother. It follows from the foregoing that all comparative weights, taken from a physiological standpoint, are unsatisfactory unless the following conditions be observed. (*a*) The child must be in perfect health; (*b*) the weighings must extend over a considerable period—not less than four weeks; (*c*) the weight should be the average of several consecutive days; (*d*) the child must always be weighed the first thing in the morning, fasting.

The remainder of the paper is occupied by tables compiled from his own and the published observations of others. Taking Pfeiffer's milk-analysis as a standard, the following conclusions are deduced. One thousand grammes of human milk of the second month contain about 20 grains of albumin, from the assimilation of which, 50 grammes of body-substance are formed, which substance probably contains 12 grammes of albumen. Thus 8 grammes, with 1·3 of nitrogen, must be decomposed. Now, since of the 1,000 grammes of milk, 700 appear as urine and 7 grammes as fæces, and the latter contain about 0·1 of nitrogen, there would remain about 1·2 of nitrogen for the urine, which seems a probable figure, and does away with the so-called deficit in the nitrogen excreted by infants at the breast.

RALPH W. LEFTWICH, M.D.

ARTICLE 3920.

VULPIAN ON THE MOTOR CENTRES OF THE BRAIN.

IN a paper read at the Académie des Sciences, on March 23, Professor Vulpian gave the results of a series of experiments made on dogs with the view of testing the accuracy of the theories of Fritsch, Hitzig, and Ferrier. It is well known that numerous nerve-fibres are found in the cortex of the brain, at a small distance from the surface; these fibres, which connect the grey matter of the convolutions with the crura, have hitherto been supposed to be less easily stimulated than the grey matter itself. When a portion of the latter, within the limits of the motor areas, is excised, stimulation of the cut surface produces the same movements as that of the grey matter, but a stronger faradaic current is necessary. M. Vulpian thinks that this is due to the fact that the vitality of the cut surface has been impaired by defective nutrition and by the injury itself. When a copper wire, covered with gutta-percha, except at the end, is pushed obliquely under the grey matter and then connected with one pole of the electric apparatus, the other electrode being placed in the nose or mouth of the animal, movements are produced in the parts connected with the motor area under which the wire has been pushed; but a very weak current, which would have no effect on the grey matter, is found to be sufficient. M. Vulpian therefore believes that the nerve-fibres situated immediately beneath the surface are more irritable than the grey matter.

Another interesting fact has been ascertained in the course of these experiments. Fritsch and Hitzig have discovered that, when a motor area is violently stimulated, epileptiform fits are often produced; this is especially the case in dogs, cats, and monkeys. Stimulation of the nerve-fibres underlying the motor areas did not seem to have the same effects. By the method described above, M. Vulpian was enabled to show that direct stimulation of the nerve-fibres is also followed by epileptiform attacks, even after the motor area itself has been destroyed by the thermo-cautery. These attacks did not differ from those described by Fritsch and Hitzig, and they could be produced by a weaker current than that used by these authors.

In conclusion, M. Vulpian gave it as his opinion that the experiments which have been supposed to prove the excitability of the grey matter of the brain in certain definite areas are devoid of value, and cannot be adduced in support of the theory of cerebral localisation.

J. S. KESER, M.D.

ARTICLE 3921.

INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE.

THE State Medical Society of Pennsylvania have issued, through their Collective Investigation Committee, three cards of inquiries on acute pneumonia, chorea, and acute rheumatism. These are exact reproductions both as to form and, as nearly as possible, as to colour, of those issued by the British Medical Association. The object, they state, being to secure a uniform system of records throughout the world. If all nations are to adopt the exact form in every detail which the British Medical Association issues, it is the more necessary that very great care be taken, before each card is issued, to make it as perfect as possible; but there are also grave objections to this uniformity of detail. Some of the questions have not produced satisfactory answers, and it would seem desirable that, rather than slavishly following our system, the results of the experience we have gained in England should be utilised abroad in improving the cards where possible, although the general scheme might be the same. In this way the results would still be comparable, but more information would be gained in consequence of the improved form of questions. Again, the types of disease, their complications, and affinities vary in each country, and a card suitable to the local conditions of England is *de facto* imperfect for any other country, and so defeats the whole object of international collective investigation. In future, in issuing new cards the general scheme should be uniform throughout the world, but the collective investigation committee of each country should insert additional questions prompted by their personal knowledge of the national type of the disease.

The Pennsylvanian Society 'earnestly hope that each member will report a case of each disease.' Could any suggestion have possibly been made more likely to produce absolutely useless results? Of what value could statistics be which were compiled from such material? Which case would a physician choose out of the hundreds if not thousands he had met with in the course of his practice? What probability is there that if the questions were repeated monthly the same cases would be chosen? Fifty cases of a disease carefully described by one observer are of value, but to ask each of fifty observers to describe a case of a common disease is mere waste of time, so far as any reliable conclusions can be drawn.

What is required is as complete a list as possible from each observer of all the cases of the special type in question which he has observed of a disease, and an estimate of the total number of cases of the disease which he has seen. Of course there will not be so many answers on account of the trouble involved, but the deductions will be of more value, as it will be possible to have the answers weighed. For instance, one observer records two cases of a complication, another observer records ten cases. The result that twelve cases of the complication have been recorded is of some but small value. The additional information that they are drawn from an experience of 30 and 1,000 cases is of the utmost importance. Had they on the other hand each recorded one case, we fail to see that any conclusion of value could be drawn.

Collective investigation undoubtedly has a future before it, but our present efforts are crude.

We hope shortly to see cards started in America to collect information on yellow fever, malaria, and other prevalent diseases, from which we may expect to learn much. G. N. Pitt, M.D.

SURGERY.

RECENT PAPERS.

3922. Nicaise.—Subperiosteal Amputation. (*Revue de Chirurgie*, No. 12, 1884.)

3923. Keetley.—The Removal of the Marrow of Long Bones in Cases of Osteo-myelitis. (*Annals of Surgery*, No. 1.)

3924. Stetter.—Etiology of Luxations of the Sternal Extremity of the Clavicle. (*Centralbl. für Chirurgie*, No. 4, 1885.)

3925. Lauenstein.—Gangrene of the Transverse Colon after Resection of the Pylorus. (*Centralbl. für Chirurgie*, No. 8, 1885.)

3926. Volkovitch, N. M.—On Extirpation of Goître. (*Khirurg. Vestnik*, Jan. 1885, pp. 29-45.)

3927. Bartosz, D. V.—On the Treatment of Incarcerated Hernia by Ether-Irrigation. (*Russkaia Medits.*, No. 3, 1885, p 62.)

3928. Makushin, A.—On Washing out the Stomach in Intestinal Obstruction. (*Vratch*, No. 4, 1885, p. 51.)

3929. Goldfeld, B.—Burnt Alum as a Dressing Material *per se*, and as an addition to Iodoform. (*Vratch*, No. 3, 1885, pp. 38-9.)

3930. Tchugunoff, S. M.—Trichiasis Vesicæ Urinariæ. (*Dnevnik Kazansk. Obshtchestva Vratchey* [*The Diary of the Kazan Medical Society*], No. 2, 1885, pp. 17-19.)

3931. Robson.—Extroversion of the Bladder. (*Brit. Med. Jour.*, Jan., p. 222.)

3932. Anderson.—Hydrocele of the Labium. (*Brit. Med. Jour.*, Jan., p. 226.)

3933. Chiene.—A Case of Nephro-lithotomy. (*Brit. Med. Jour.*, Feb., p. 280.)

3934. Hill.—The Treatment of Phimosis without Operation. (*Brit. Med. Jour.*, Jan., p. 226.)

3935. Spanton.—A Case of Calculus weighing eight and a half ounces. (*Brit. Med. Jour.*, Jan., p. 227.)

3936. Edwards.—Cucain in Rectal Surgery. (*Lancet*, Jan., p. 220.)

3937. Simpson.—The Use of Cucain in Minor Surgery. (*Lancet*, Jan., p. 226.)

3938. Harrison.—A Case of Lithotomy where the Nucleus of a Large Phosphatic Calculus was the Whalebone Mouthpiece of a Tobacco-pipe. (*Lancet*, Feb., p. 287.)

3939. Freeman.—A Case of Needle in the Bladder Simulating Stone. (*Lancet*, Feb., p. 340.)

3940. Jones.—Two Cases of Spinal Injury. (*Lancet*, Feb., p. 338.)

3941. Horteloup.—The Treatment of Varicocele by Excision of a Fold of the Scrotum.

3942. Verdier.—The Relation between Syphilis and Aneurysm. (*Revue de Thér. Med. Chir.*, 1885, No. 4.)

3943. Tillaux.—The Dangers of Repeated Injections of Tincture of Iodine in Hydrocele. (*Revue Méd.*, 1885, No. 9.)

Art. 3922. *Nicaise on Subperiosteal Amputation.*—A paper by Dr. Nicaise, read at the International Medical Congress in Copenhagen, is published in the *Revue de Chirurgie*, No. 12, 1884. In 1859 M. Ollier first demonstrated the utility, in amputating, of preserving periosteum, in order to close the medullary canal, and to favour union by primary intention. At this period, however, the suppuration that almost constantly attended the healing of stumps rendered attempts to preserve this membrane quite useless, and so for a time they were abandoned. Since the introduction into surgery of Lister's antiseptic method, further trials have been made under the improved conditions, and the practice has been advocated by Esmarch, Volkmann, Maas, Trélat, and others. Since 1881, Dr. Nicaise has in amputating always preserved a portion of periosteum beyond the end of the bone. As this membrane retracts very much when detached from its bone, it is thought always necessary to take up a long 'cuff,' the length of which should be about equal to the diameter of the bone at the point of section. Esmarch and Maas bring together the free edges of the process of peritoneum by a suture of prepared catgut; Nicaise does not apply a suture, but allows the long cuff to form over the end of the bone a kind of hood. It has been proved by experiments on animals that a flap or loose process of periosteum rapidly closes the open end of the medullary cavity, and that on the inner surface of this occluding membrane a thin layer of osseous tissue is formed. M. Nicaise alludes to a case of amputation of the thigh for chronic disease of the knee in a tuberculous man, aged 42. After death, which occurred twenty-nine days later, when the stump had almost entirely healed, the lower extremity of the divided femur was found completely closed by a septum of thickened and granular periosteum, above which was a layer of newly formed bone-tissue, about one-fifth of an inch in thickness. It has been shown by Le Fort and Trélat that a minute flap of muscular tissue brought over the end of a divided long bone will contract adhesions, close the medullary cavity, and even form a thin layer of osseous tissue. M. Nicaise, however, holds that, when a flap of periosteum is applied, the end of the bone is in immediate relation with a membrane that physiologically is best adapted to the purposes of protecting and forming osseous tissue. It has been objected to the preservation of periosteum in amputation, that this practice favours the formation of irregularly shaped osteophytic growths. Such growths, however, according to the author, are formed only after suppuration in the stump, or ostitis at the extremity of the bone.

3923. *Keetley on the Removal of the Marrow of Long Bones in Cases of Osteo-myelitis.*—In the initial number of the *Annals of Surgery*, a monthly review of surgical science, which is to be published simultaneously in Great Britain and the United States, Mr. C. B. Keetley, the home editor, gives an original memoir on removal (by scraping out) of the marrow of long bones, and especially on this proceeding as a treatment of osteo-myelitis, and also on the same followed by the local application of corrosive sublimate solution and of iodoform. Three cases that had been treated by the author are published here, which, together with cases of amputation recorded by Stoll and Petrowski, prove to demonstration the safety with which the medullary cavity of a long bone can be opened, scraped out, drained, and treated locally by powerful germicide drugs. This proceeding, Mr. Keetley states, is followed by little or no pain or constitutional reaction, or danger to the life of the bone. That marrow is not essential to the life of a bone, is proved by such facts as that certain bones of birds have no marrow, and that, as shown by the experiments of Maas, not only can bones live without marrow, but, when fractured, they unite just as well if deprived of it as if left in the normal state. This method of treatment, it is argued, fulfils the indications of removing the diseased tissues thoroughly, and by it the possibility is proved of accomplishing this object without sacrificing the bone or the limb. Mr. Keetley concludes with the following practical observations. '1. In the face of Schede's statements as to the dangers of using iodoform too freely, and on the occasional existence of idiosyncrasy with regard to that drug, he would hesitate to imitate the surgeons who fill the medullary cavity with it. Moreover, the cases reported in this memoir show that it is superfluous to do so. 2. If the shaft of a long bone cannot be thoroughly scraped out through a lateral hole, the bone may be completely divided, and yet speedy and thorough union reckoned on.'

3924. *Stetter on the Etiology of Luxations of the Sternal Extremity of the Clavicle.*—According to Boyer, in the production of forward luxation of the sternal extremity of the clavicle, the middle of this bone comes into contact with the first rib, which supplies a fulcrum for it, and converts it into a lever of the first order. Dr. Stetter, of Königsberg, basing his views on anatomical data, thinks it very improbable that this lever-action takes any direct part in the mechanism of forward luxation of the inner end of the clavicle. It is held that any luxation of the clavicle due to lever-action, is one not forwards but in an upward direction, and that forward luxation produced after lever-action of the clavicle on the first rib is really a secondary displacement, and follows a primary displacement of the clavicle upwards. Luxation of the sternal end of the clavicle can be effected much more readily in an upward than in a forward direction, because the front of the capsule is strengthened by fibres which ascend from the first rib, and the sternum (the anterior sterno-clavicular ligament of Humphry) and the sternal fibres of the sterno-mastoid muscle, pass over the front of the joint, whilst its upper part is not thus protected, and the capsule here may, therefore, be more readily ruptured. Luxation upwards, as a primary displacement, occurs usually through the above-mentioned lever-action; at times, but less frequently, through force acting directly or indirectly from without and below on the shoulder. Luxation forwards, as a primary displacement, occurs only as a result of the direct action of force applied to the shoulder. The injury is produced by a fall or blow from behind, and without the shoulder acting in the long axis of the clavicle and impinging on the anterior wall of the capsule. Luxation upwards may be produced without lever-action, if the injuring force strike either the outer surface of the depressed shoulder running inwards and upwards in the direction of the clavicle; or the elbow-joint with the arm abducted and the shoulder depressed.

3925. *Lauenstein on Gangrene of the Transverse Colon after Resection of the Pylorus.*—In the *Centralbl. für Chir.*, No. 8, 1885. Dr. Carl Lauenstein, of Hamburg, writes that, since his first report in 1882 of an instance of gangrene of the transverse colon after removal of a portion of the meso-colon that had contracted adhesions to the posterior surface of the diseased pylorus, four other cases of this unfortunate complication have been recorded. Of these two cases were observed by Czerny, one by Molitor and one by Küster. In each of these cases the tumour was of considerable size, and by its weight had dragged downwards the pylorus from its normal position above the head of the pancreas. There was more or less mobility of the tumour, even in one case in which it had involved the pancreas. In one of the cases the growth was a benign one, and in each of the other four malignant. There was nothing of special import in the clinical features of these five cases, to favour the expectation that the diagnosis of adhesions of the pyloric growth to the meso-colon is ever likely to be made out before the abdominal cavity has been opened. There are three different ways in which the surgeon might prevent the inevitably fatal complication of gangrene of intestine, after separation of the transverse colon from its mesentery. According to Czerny, the surgeon must submit to necessity, and, whenever a portion of mesentery has been removed close up to the intestine, that portion of intestine must at once be resected. The author has practised dissection of the serous coat from the posterior surface of the pylorus together with its adhesions to the meso-colon, and retention of these structures *in situ* after removal of the disease. This procedure, however, is admissible only in cases of non-malignant growths.

In the third way, the disease is not directly attacked nor treated radically, but a gastro-intestinal fistula is established, as proposed by Wölfler in cases of extensive carcinomatous disease of the pylorus with stricture. In conclusion, the author insists that the gastro-colic ligament, which must always be cut through in resection of the pylorus, does not in any way influence the nutrition of the colon. The arteries supplying this intestine pass to it between the two layers of the meso-colon, and it is only through division of this membrane that the vitality of the intestinal walls is imperilled.

W. JOHNSON SMITH.

3926. *Volkovitch on Extirpation of Goître.*—In the *Khirurg. Vestnik*, Jan. 1885, p. 29, Dr. N. M. Volkovitch, of Kiev, describes an interesting case of an anæmic and emaciated married woman, a cook, aged 38, with goître of ten years' standing, who was admitted to Professor T. K. Bornhaupt's clinic on account of dangerous symptoms (difficulty in breathing, occasionally amounting to dyspnœa, and difficulty in deglutition) which indicated operative interference. Professor Bornhaupt removed the whole hypertrophied gland. Hæmorrhage was moderate. The greater part of the wound was sewn up, and the cavity of the wound was filled up with a plug of iodoform gauze, which was introduced through the remaining opening. The wound behaved satisfactorily, and nearly healed by the time of the patient leaving the clinic, two months after the operation. It was entirely different with the patient's general state. Anæmia and weakness became decidedly worse after the operation, and on the fifth day typical tetany supervened. Tonic contractions were limited chiefly to the flexors of the hands, and individual muscles of the legs; but, later on, invaded also the abdominal, respiratory, and facial muscles. They now abated, and then paroxysmatically increased, but never left the patient up to her death. Simultaneously, she began to feel formication and numbness in the hands. By the end of three months after the operation there appeared eczema of the legs, which subsequently gradually spread all over the body, showing a strikingly symmetrical distribution. At the same time there were found a myxœdematoid state of the integuments (including dryness and pallor of the skin), vacant and stupid expression of the face, striking apathy, failure of hearing and memory, difficult articulation and respiration, weakness of voice, moderate ascites, slight albuminuria. The patient died about four months after the extirpation of the goître. The author thinks that all the symptoms, including the tetany and eczema, were directly caused by the removal of the whole thyroid gland. In other words, his case is a new instance of so-called cachexia strumipriva of Reverdin, Kocher, Bruns, &c.; and, at the same time, a new strong argument against the removal of the entire thyroid body.

3927. *Bartosz on the Treatment of Incarcerated Hernia by Ether-Irrigation.*—In the *Russkaia Meditz.*, No. 3, 1885, p. 62, Dr. D. V. Bartosz, of Romny, Poltava Government, writes that during the last two years he used ether-irrigation with brilliant success in all his cases of strangulated hernia, seventeen in number. Irrigation was performed after Finkelnstein's method; that is, a tablespoonful of ether was poured over the tumour every half hour. The hernia disappeared spontaneously, or under slight pressure in the worst cases, within four or five hours. The duration of strangulation varied between a few hours and four days. The author describes, also, a case of internal intestinal obstruction in a woman, aged 60, with nine days' constipation, incessant fæcal vomiting, tympanites, thready pulse, &c.; in which, after all the usual means had failed, ether-irrigation all over the abdomen brought about profuse stools in an hour and a half, the patient completely recovering. [Papers by Drs. Krasovsky and Filatoff on the same subject may be found in the LONDON MEDICAL RECORD, 1884, April, p. 149, and May, p. 197.]

3928. *Makushin on Washing out the Stomach in Intestinal Obstruction.*—In the *Vratch*, No. 4, 1885, p. 51, Dr. A. Makushin reports the case of a previously healthy labourer, aged 55, in whom there suddenly appeared abdominal pain, tympanites, and vomiting. The symptoms daily grew worse. On the fifth day vomiting became fæcal, and agonising hiccough supervened. No defæcation was obtained during ten days, in spite of large water and air enemata. Following the recommendation of Professor Kussmaul (*see* the LONDON MEDICAL RECORD, February 1885, p. 62), the author tried daily washing out the stomach through a gastric tube, using each time about eleven fluid pounds of water, divided into two portions. After the second washing, vomiting ceased, hiccough and abdominal swelling diminished; and an enema now produced stools (for the first time, on the twelfth day of the disease). After a third washing out and another small enema, the patient recovered.

3929. *Goldfeld on Burnt Alum as a Dressing Material.*—In the *Vratch*, No. 3, 1885, p. 38, Dr. B. Goldfeld writes that while searching for a cheap, safe, odourless, and non-volatile antiseptic dressing material, which could be conveniently used in poor peasant practice, he employed powdered burnt alum, and found the drug worthy of further trial. Burnt alum used alone gave satisfactory results in the treatment of numerous cases of syphilitic and scrofulous ulcers, and of frost-bite, as well as in dressing wounds after minor operations (such as opening phlegmons and abscesses, amputation of fingers and toes, &c.). In all the cases where the wound from the outset was free from putrefaction, it ran its course wholly aseptically under alum dressing. It proved otherwise in regard to wounds which, when they came under observation, were already in a putrefied condition; here, alum alone was found quite powerless to destroy the offensive odour, &c. In view of the failure, the author decided to dress wounds with a mixture of 4 parts of alum and 1 part of iodoform, and after an extensive trial he arrived at the conclusion that this combination not only forms a reproachless antiseptic dressing material, but gives still better results than iodoform used alone. According to the author, the chief advantage of this styptic and drying mixture of alum and iodoform is that granulations are less 'juicy' and less inclined to bleed than in the case of iodoform alone.

3930. *Tchugunoff on Trichiasis of the Urinary Bladder.*—Under this name Dr. S. M. Tchugunoff, of Shadrinsk, Perm Government, describes (*Dnevnik Kasansk. Ob. Vratchey*, No. 2, 1885) a case of bursting of a dermoid ovarian cyst into the bladder. The patient, a married peasant woman, aged 43, having been delivered of her thirteenth child about two years ago, from the second week after the labour began to suffer from acute pain in the right side of her belly. During the last three months before her admission, tenesmus on passing urine, and subsequently a difficulty in micturition, appeared, the urine occasionally dribbling away in drops. On vaginal examination a tender movable hard tumour, of the size of a fœtal head, in the situation of the right ovary, was detected. Catheterisation removed a considerable quantity of retained urine. On the next day a dark brown, rather firmish body was found protruding from the urethra. On its withdrawal, by means of forceps, again a large amount of urine escaped. The urine contained this time numerous thin hairs, about 1·5 centimètres in length, and puriform mucus. The extracted body proved to be an empty leathery sac, about 6·2 centimètres in length, and 3·1 centimètres in breadth, broken in two places. Its outer surface was covered with thin fair hair, about 1 centimètre long; its internal surface resembled subcutaneous cellular tissue. Henceforward micturition became free, and the abdominal pain disappeared. The abdominal tumour gradually diminished, dwindling in two months to the size of a hen's egg. Dr. Tchugunoff was able to find only six other identical cases (in Ziemssen's *Handbook* vol. ix.) V. Idelson, M.D.

3931. *Robson on Extroversion of the Bladder.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 222, Mr. Mayo Robson describes a case of extroversion of the bladder in a girl aged 8, on whom Wood's plastic operation was performed, but during the process of healing retraction took place to such an extent that a large portion of the vesical surface became exposed. Mr. Robson then decided to perform the following plastic operation. The prominent folds of integument, forming the labia majora, were incised for three inches vertically; and from the upper end of these cuts incisions were carried outwards, so as to allow two triangular flaps of skin to be slid upwards. The square flap of skin made in Wood's operation was loosened at its attachment to the pyriform lateral flaps, and turned downwards, so that the cutaneous surface again covered the vesical mucous membrane. The newly made groin-flaps were approximated toward the middle line, covering the raw surface, and secured for an inch and a half in apposition; while the upper margins were sutured to the newly refreshed lower margins of the pyriform flaps of Wood's operation. Hare-lip pins and sutures secured the parts, and dressings of carbolised oil were used. The child left the hospital with a slit between two surfaces of skin, in the usual situation of the labia; a portable urinal was fitted, the operation proving very successful.

3932. *Anderson on a Case of Hydrocele of the Labium.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 226, Mr. A. R. Anderson records a case of hydrocele of the labium, occurring in a woman aged 28. The patient said that for several years a tumour had been gradually growing in the right groin. On examination, a swelling of considerable size, oval and elongated in shape, was seen occupying the right labium, and reaching up into the corresponding inguinal canal. About five ounces of a deep yellow-coloured fluid were removed by a small opening; the sac was then injected with iodine. The tumour did not return, and the patient was well in a week. The differences which distinguished the swelling from an inguinal hernia were these. 1. The tumour never varied in size, nor disappeared when the patient lay down. 2. It had been coming for years, and gradually growing larger. 3. It had created no derangement of the general health, or intestinal disturbance. 4. Its upper limit could with care be defined, and it could be pushed down into the labium. It simulated hernia in its situation and shape, and in the very distinct impulse on coughing.

3933. *Chiene on a Case of Nephro-lithotomy.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 280, Mr. Chiene reports the case of a man, aged 29, who suffered from attacks of severe pain in the small of the back. For four years previously the patient had suffered at various times from sudden attacks of severe pain in the region of the right kidney, for which he had undergone various kinds of treatment without obtaining relief. When the author saw him he was in good health, but the urine contained albumen, sometimes only a trace, sometimes as much as one half; the colour of the urine varied from pale amber to a dark sherry, and was sometimes smoky. Microscopic examination revealed a small quantity of pus and blood-corpuscles. Renal calculus was diagnosed, and the author decided to operate. On Oct. 15, 1884, the patient was placed under chloroform, and an oblique incision, four inches in length, extending from the edge of the erector spinæ, and parallel to the last rib, was made in the right lumbar region. The kidney was easily reached, and on its anterior aspect and lower half an elevation was at once felt. The renal substance was scratched through with the finger-nail until the stone was reached; the wound in the kidney was then enlarged with dressing forceps, and after some difficulty the stone was removed by means of a pair of vulsellum forceps. Two drainage-tubes were then inserted into the substance of the kidney; the wound was united with horsehair sutures, and dressed with carbolised dressings. The stone was oval, and weighed, when dry, over 48 grains. It was found to consist mainly of oxalate of lime, with a small proportion of uric acid. It had none of the characteristic appearances or dense heaviness of a typical mulberry calculus; its central portion was porous, with a pale, somewhat crystalline, outer crust. The patient made a splendid recovery, and left the hospital five weeks after the date of the operation.

3934. *Hill on the Treatment of Phimosis without Operation.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 226, Mr. Berkeley Hill writes that he agrees with the writer of an article in the *Journal*, Nov. 8, 1884, in stating that circumcision is rarely necessary for simple phimosis; but thinks that he has assumed too hastily that surgeons overlook the facility with which expansion of the free border may be obtained. Mr. Berkeley Hill finds the prepuce-dilator, invented by Mr. Carver of Cambridge, and sold by Coxeter, to answer perfectly well. The author further states that he generally applies the dilator for the first time, and allows the patient to do it himself afterwards. Few cases require more than six or eight applications to widen the narrow free border to the necessary extent. If the two blades of the dilator be slowly screwed apart, the skin is not split, and the operation is painless.

3935. *Spanton on a Case of Calculus weighing Eight and a Half Ounces.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 227, Mr. W. D. Spanton records the notes of a case of bilateral lithotomy, performed on a man, aged 37, who was suffering from a very large vesical calculus. On Nov. 22, 1884, the author operated, commencing with the usual lateral incision; but this was found too small, and at last another incision had to be made on the right side, converting the operation into one of bilateral lithotomy; this not sufficing, Mr. Spanton next introduced a pair of bone-forceps and broke up the stone, removing the pieces separately. It was then seen that two stones had firmly united to form a very large mass. One calculus weighed four ounces, the other four and a half ounces, and were composed of mixed phosphate and uric acid. The patient made a good recovery, and left the hospital cured in about eight weeks from the date of the operation.

3936. *Edwards on Cucain in Rectal Surgery.*—In the *Lancet*, Jan. 1885, p. 220, it is stated that Mr. Swinford Edwards ligatured six large hæmorrhoids in a woman, aged 50, at the West London Hospital. As the patient was the subject of aortic disease, it was decided to try the effect of cucain. One minim of a 4 per cent. solution of hydrochlorate of cucain was therefore injected into each pile at the muco-cutaneous junction, after which the entire surface of the mucous membrane at the lower part of the rectum was painted over with a like solution. The operation was almost painless, and only twenty minims of the solution were used in all.

3937. *Simpson on the Use of Cucain in Minor Surgery.*—Dr. J. H. Simpson, in the *Lancet*, Jan. 1885, p. 226, reports that he removed two small nodules of scirrhus from a patient's breast by the help of a solution of cucain. Three minims of a 4 per cent. solution were injected on each side of one nodule; and, after waiting ten minutes, the author made an incision one inch and a half long, and removed the growth without causing any suffering. The wound was then closed by sutures, which the patient scarcely felt. After closing the first wound, the author injected another three minims near the second nodule, and operated in the same way; the patient felt a little pain, as the operator had not allowed sufficient time for the third injection to take effect. No after-effects were felt, and both wounds healed by first intention.

3938. *Harrison on a Case of Lithotomy where the Nucleus of a Large Phosphatic Calculus was the Whalebone Mouth-piece of a Tobacco-pipe.*—In the *Lancet*, Feb. 1885, p. 287, Mr. Reginald Harrison records the following interesting case. A seaman, aged 33, suffering from symptoms of vesical irritation, was found, on examination, to have a calculus, large, soft, and of a peculiar shape; and lithotomy was decided upon. On June 27, 1884, the lateral operation was performed, and a large phosphatic calculus removed, which broke under the grasp of the forceps, and disclosed the whalebone mouth-piece of a tobacco-pipe, to which a small piece of rotten string was attached. The patient made a good recovery, and left the infirmary one month after the operation. When the patient saw what had been extracted from his bladder, he remarked 'he was glad to see it again,' and stated that he had swallowed the mouth-piece three years previously, whilst playing with some companions on board ship. Nothing would persuade him that such an explanation was improbable. Mr. Harrison states that in the *Med. Times and Gazette*, July 30, 1859, Sir Alfred Roberts, of Sydney, records a case in which he removed by lithotomy a piece of slate-pencil two and a quarter inches long, which, it was alleged, had been swallowed. In that case, Sir Alfred Roberts was driven to the conclusion that the patient had swallowed the pencil, and that it had made its way into the bladder by inflammation and ulceration.

3939. *Freeman on a Case of Needle in the Bladder Simulating Stone.*—In the *Lancet*, Feb. 1885, p. 340, Mr. H. W. Freeman records the case of a boy under 4 years of age, who was brought to him suffering from bladder irritation, with symptoms of stone. On Dec. 6 the author performed lateral lithotomy, and, on reaching the bladder, he felt a sharp body sticking in the anterior portion of the prostate, encrusted with calcareous matter. After some difficulty, a long pair of flat-pointed dressing forceps were introduced, and a small-sized darning-needle, measuring 1⅜ inch in length, and covered for more than an inch with phosphatic deposit, was extracted. The deposit was ⅜ inch in thickness, and covered the sharp point of the needle, but the eye end was free of deposit. The child made a good recovery. The mother asserted that she remembered that the child had swallowed a similar needle eighteen months previously.

3940. *Jones on Two Cases of Spinal Injury.*—In the *Lancet*, February 1885, p. 338, Mr. Thomas Jones reports two interesting cases of spinal injury. The first occurred in a man, aged 23, who was injured by some heavy pieces of timber falling upon his back and the lower part of the neck. On examination, it was found that the spine was dislocated in the upper lumbar region, the first lumbar vertebra being separated from the second; also that there was complete motor and sensory paralysis in both lower extremities. It was decided to place the patient under chloroform, and to attempt reduction. Two long towels were fixed to the thighs, immediately above each knee, while an assistant steadied the chest and upper part of the spine. After a few seconds' extension a sudden jerk was experienced, and the vertebra regained its position with an audible click. Motion and sensation were partially restored soon after the patient recovered from the anæsthetic, and great pain was experienced in the region of the injury. Three days subsequently the urine became alkaline, and remained so for thirty-five days, though the bladder was washed out daily with a weak solution of boracic acid; and even eight months after the accident the patient was obliged to empty the bladder by a catheter, though he could at this time walk with comfort and without support of any kind. The second case occurred in a man, aged 27, who struck his back against a large stone whilst wrestling, at the same time jerking the head violently backwards. In an instant the patient experienced great pain, and discovered his inability to move any of his limbs. On examining the cervical part of the spine, a marked depression, involving the fifth and sixth vertebræ, with swelling of the soft parts, was found. Next day, sensation was completely lost in the lower limbs, and in the trunk as high as the third intercostal space on each side; the loss of motion in all four limbs was complete. Mr. Jones decided to attempt reduction of the injury; this he accomplished by grasping the occiput in the right hand while the left pressed against the chin; he then slowly and deliberately flexed the neck, and the deformity disappeared with a decided crepitant sensation. As the result of the reduction the right arm regained the power of motion, but the patient died a few hours afterwards from urgent dyspnœa. At the *post mortem* examination there was found fracture of the body of the fifth cervical vertebra, with free destruction of the ligaments between the fourth and fifth vertebræ.

Richard Neale, M.D.

3941. *Horteloup on the Treatment of Varicocele by Excision of a Fold of the Scrotum.*—At a recent meeting of the Académie de Médecine (Feb. 24), the author recommended a plan of operation which he has practised for several years with success. He pushes the testicles upwards, and seizes with a long pair of forceps a fold of scrotum containing the plexus of the spermatic veins. Deep sutures are passed immediately in front of the forceps and fixed by leaden tubes; a row of superficial sutures is then placed a little nearer the edge of the fold, which is afterwards excised. The superficial sutures are tied, and an antiseptic dressing is applied to the wound. M. Horteloup has performed this operation in eighteen cases without any serious accident, and expresses himself much pleased with the ultimate results.

3942. *Verdier on the Relations between Syphilis and Aneurysm.*—In his inaugural dissertation the author (*Revue de Thér. Méd. Chir.*, 1885, No. 4) has come to the following conclusions. Syphilis is a frequent cause of various arterial lesions which may be followed by a dilatation of the vessels. On an average, aneurysms appear about eleven years after the onset of the disease. Iodide of potassium is useful, but a complete cure is a rare occurrence, and the disease is often fatal.

3943. *Tillaux on the Dangers of Repeated Injections of Tincture of Iodine in Hydrocele.*—M. Tillaux has recently had under his care a man, aged 60, who had been suffering from hydrocele for two years, and who had been treated by injections of tincture of iodine. The first injection having produced no apparent effect, a second one was made a fortnight later and the operation was followed by an abundant extravasation of blood into the cavity of the tunica vaginalis. Commenting on this accident, the author states (*Revue Méd.*, 1885, No. 9) that, in case of failure at a first attempt, the injection must not be repeated before six or eight weeks have elapsed. When the second injection is made too soon, hæmatocele is likely to occur in consequence of the formation of vascular pseudo-membranes.

J. S. KESER, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3944. KEBBELL.—Tincture of Benzoin in Influenza and Catarrh. (*Brit. Med. Jour.*, Feb., p. 430.)

3945. PAGET.—Cucain in Coryza. (*Brit. Med. Jour.*, Feb., p. 430.)

3946. ABBOTT.—Antiseptic Solutions of Cucain and other Alkaloids. (*Lancet*, Feb., p. 315.)

3947. BELLAMY.—Cucain in Chronic Cystitis and Irritable Bladder. (*Lancet*, Feb., p. 315.)

3948. HOLDEN.—Cucain in Cancer. (*Brit. Med. Jour.*, Feb., p. 377.)

3949. FENWICK.—The Cucain Fungus. (*Lancet*, Jan., p. 224.)

3950. BRUEN.—The Treatment of Delirium Tremens. (*Boston Med. and Surg. Jour.*)

3951. MULLAN.—The Value of Quinine and some of its Congeners as Parturients. (*Brit. Med. Jour.*, Feb., p. 427.)

3952. HAMILTON.—Iron Albuminate in Anæmia. (*New York Med. Record.*)

3953. MENNELL.—Jacaranda Lancifoliata. (*Brit. Med. Jour.*, Feb., p. 327.)

3954. MARSHALL.—Chorea treated with Hydrobromic Acid. (*Brit. Med. Jour.*, Feb., p. 377.)

3955. STRAHAN.—The Action of Paraldehyde. (*Lancet*, Jan., p. 201.)

3956. HALPIN.—Hazeline in Hæmorrhage from the Bowel. (*Brit. Med. Jour.*, Jan., p. 227.)

3957. STARTIN.—Lupus cured by Sodium Ethylate. (*Med. Press and Circular*, Feb. 1883, p. 153.)

3958. KINGSBURY.—A Case of Asthma produced by a Linseed Poultice. (*Brit. Med. Jour.*, Feb. 1885, p. 278.)

3959. VON JAKSCH.—The Use of Thallin and its Salts. (*Wiener Med. Wochensch.*, 1884, No. 48.

3960. BINZ. — Inhalation of Ozone. (*Berl. Klin. Wochensch.*, 1884, No. 12.)

3961. BERNHEIM.—The Treatment of Subacute Rheumatism by Antipyrin. (*Gaz. des Hôp.*, 1885, No. 26.)

3962. MINGAZZINI.—The Action of Antipyrin combined with Kairin. (*Gazz. degli Ospit.*, Dec. 28, 1884.)

3963. CHÉRON.—The Treatment of Cervical Endometritis. (*Revue de Thérap. Médico-Chir.*, 1885, No. 5.)

3964. LEYDEN.—The Treatment of Sclerosis of the Coronary Arteries. (*Centralbl. für die Ges. Therapie*, November 1884.)

3965. KALB.—The Treatment of Typhoid Fever by Inunctions of Mercurial Ointment. (*Annales Méd.-Chir.*, 1887, No. 1.)

3966. HOLZ.—The Treatment of Vomiting in Pregnancy by Cucain.

3967. JOHANSOHN.—On Russian Vaseline. (*Pharmatzevtitchesky Jürnal*, No. 1, 1885, pp. 1–8.)

3968. SEMTCHENKO, D. G.—On Cucain in Pædiatric Practice. (*Vratch*, No. 7, 1885, p. 103.)

3969. BABAIEFF, A. N.—On Cucain in Impotentia Virilis and Laryngeal Tuberculosis. (*Proceedings of the Caucasian Medical Society*, No. 12, 1884, p. 299.)

3970. CKIANDI-BEY AND OTHERS.—Disulphide of Carbon. (*Compt. Rend.*, tome xcix., p. 509; *Ibid.*, tome xcvii., p. 249; tome xcixi., p. 697.)

3971. RENZONE.—The Principal Antipyretic Drugs, and the Mode of Recognising them in the Urine. (*Riv. Internaz. de Med. e Chirurg.*, Fasc. iv., 1884.)

3972. NIESKE.—The Calorific Properties of Sodium Salts. (*Der Fortschritt*, No. 4, Feb. 20, 1885.)

3973. MYA.—The Influence of Nitrite of Amyl on the Urine. (*Gazz. delle Cliniche*, Jan. 27, 1885; *Gazz. degli Ospitali*, March 11, 1885.)

ART. 3944. *Kebbell on Tincture of Benzoin in Influenza and Catarrh.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 430, Mr. A. Kebbell speaks of the great value derived from inhaling tincture of benzoin in cases of influenza and catarrh. The tincture should be inhaled directly from a bottle containing it. If this be done at the commencement of the complaint, speedy relief will be obtained. [In 1879 Dr. Rutherford extolled the value of benzoic acid given internally in cases of catarrh. *Vide Medical Digest*, sect. 593 : 6 —*Rep.*]

3945. *Paget on Cucain in Coryza.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 430, Dr. W. S. Paget states that he tried cucain with good result in the case of a lady who was suffering from severe frontal headache, copious lacrymation, and an entire stoppage of both nostrils. Into each nostril a piece of cotton-wool, soaked in a 4 per cent. solution, was inserted; the relief was great; both passages became entirely free, and remained so permanently. The author also treated himself in the same way when suffering from a similar attack, and at the same time applied one drop of the solution to each eye. The relief was almost instantaneous; but after twelve hours the symptoms showed signs of reappearing, when the same treatment was adopted, cutting short the attack completely. Dr. Paget suggests that cucain should during the coming season be tried in hay-fever.

3946. *Abbott on Antiseptic Solutions of Cucain and other Alkaloids.*—In the *Lancet*, Feb. 1885, p. 315, Mr. G. Abbott contributes a letter on the method of preserving solutions of cucain and other alkaloids. He has found that solutions of atropine are best preserved if made with camphor or thymol, and suggests that camphor in powder or as a spirit be added to solutions of cucain. The liquor atropiæ, P.B., contains some spirits of wine, and as a consequence it causes considerable smarting when dropped into the eye, whereas, if it be made with a little camphor it will cause no pain, and will keep free from fungi for an almost unlimited time.

3947. *Bellamy on Cucain in Chronic Cystitis and Irritable Bladder.*—In the *Lancet*, Feb. 1885, p. 315, Mr. E. Bellamy writes that he has used cucain with much success in cases of irritable bladder with spasmodic contraction of the sphincter vesicæ. The author has had made some small bougies of gelatine, about three inches long, charged with one quarter of a grain of hydrochlorate of cucain. These have been pushed down the urethra to the irritable neck of the bladder by an ordinary elastic catheter; the result being that the patient in the first instance almost immediately expressed the opinion that he was 'going to get control' over his bladder, and, secondly, that the surgeon was enabled to make a most thorough examination, without the patient suffering any pain whatever.

3948. *Holden on Cucain in Cancer.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 377, Dr. J. S. Holden states that he has found the application of cucain of great use, in a case of what he terms an epithelioma on the third finger of the left hand. Dr. Holden wished to get rid of the growth by following Dr. Marsden's treatment by arsenical mucilage. This, however, gave the patient such pain that he refused to continue the application long enough to remove the growth. Dr. Holden managed to gain his consent to have the tumour scraped down to the raw bleeding surface; he then applied to it a 4 per cent. solution of the hydrochlorate of cucain, after which he applied a third coating of the arsenic. The patient was able to bear the mucilage for twelve hours, when he removed it and commenced poulticing the growth; this he continued to do for three days, when the tumour came away, leaving a healthy granulating sore.

3949. *Fenwick on the Cucain Fungus.*—In the *Lancet*, Jan. 1885, p. 224, Mr. H. Fenwick writes to point out that in a 4 per cent. solution of cucain a peculiar mould appears after a few days. This fungus seems to have the property of setting up inflammation of the mucous membrane. It is well known that the epithelium is denuded by the action of solutions of cucain, thus making it very dangerous to use solutions of this drug if there be a fungus growing in it. The author was led to suspect something was wrong with a solution which he had used for some time without meeting with any bad results, but three cases of stricture came back with severe urethritis after the use of a stale solution, in which, on examination, the fungus was detected. A 25 per cent. solution, which had been made for some time, was also examined, but contained no fungus.

3950. *Bruen on the Treatment of Delirium Tremens.*—In the *Boston Med. and Surg. Jour.* Dr. Bruen states that delirium tremens is a self-limited disease, and that the patient should be placed in a state of perfect quiet, with an attendant whose duty should be to administer food at short intervals, combined with stomachic stimulants, such as strong beef-tea strongly impregnated with pepper, and egg beaten up with milk. If the patient cannot sleep, feed him during the day, and at night give five grains of chloral every five minutes until 20 grains, are taken. If sleep cannot be obtained in this way, and the patient be strong with a good pulse, then three doses of the following mixture may be given at intervals of two hours:—℞ Potass. et antimon. tart. gr. $\frac{1}{8}$, tincturæ opii ♏v. ad viij., aq. camph. ℥j. The appetite may be aided by the following:—℞ Morph. sulph. gr. j. ad ij., misturæ quassiæ, tincturæ calumbæ, tincturæ cinchonæ co., tincturæ gentianæ co., āā ℥j. A teaspoonful three or four times a day, one hour before meals.

3951. *Mullan on the Value of Quinine and some of its Congeners as Parturients.*—In the *Brit. Med. Jour.*, February 1885, p. 427, Dr. A. Mullan recommends the use of quinine or quinetum in cases of labour, when the pains are weak, from want of contractile power in the uterus. The author derives the following conclusions from an extensive use of these drugs during the last seven years. 1. Quinine or quinetum in doses of four grains and upwards, in powder, will start pains afresh in twenty or thirty minutes; in order to maintain the effect, the dose should be repeated at intervals of half an hour. 2. It produces no headache nor sickness. 3. The pains produced are not continuous, like those excited by ergot, but intermittent, like those of normal labour, due evidently to a tonic effect upon the whole system, and not to special stimulation of the uterus only. 4. Quinine can be used where ergot is absolutely contra-indicated, with perfect safety to mother and child.

3952. *Hamilton on the use of Iron Albuminate in Anæmia.*—In the *New York Med. Record*, Dr. Hamilton writes that he has been in the habit of prescribing iron with albumen to nervous patients who were unable to take any other preparations of iron. Mr. Angelo, of New York, has made a dried preparation of the iron albuminate, and has combined with it chocolate, and moulded this into small lozenges, each of which contains ten grains of the salt. Some observers have stated that the albuminate of the peroxide of iron is formed in the blood, and that this is the basis of the red corpuscles; this may account for the success which the author states he has met with by using the iron albuminate instead of other preparations.

3953. *Mennell on Jacaranda Lancifoliata.*—In the *Brit. Med. Jour.* Feb. 1885, p. 327, Mr. Z. Mennell writes that he has used a preparation of jacaranda lancifoliata with great success in fourteen cases of gonorrhœa. It succeeded in stopping the discharge without any complication, in, at the most, three weeks. In no case was it used, except where a discharge had persisted over four months. An injection of the strength of ten minims to the ounce was used; and in a case of long standing gleet, a mixture of the drug was given as well, of the strength of fifteen minims as a dose, and the patient was quite well in three weeks.

3954. *Marshall on Chorea treated with Hydrobromic Acid.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 377, Mr. J. G. Marshall writes that he has used hydrobromic acid with success in two cases of rea. One was a girl aged ten years, in whom the l treatment with iron and arsenic had failed. author then gave hydrobromic acid in thirty-m doses three times a day, the result being that patient improved rapidly. The second case was a young girl, in whom the disease presented itself very acute form. The acid was given in forty-im doses three times a day, and in three days improvement was marked. At the end of three eks the cure was almost complete; the author en discontinued the drug, and gave liquor arseni-lis. The patient soon became rapidly worse, and e day threw herself in the fire. The arsenic was rsevered with, but, no good resulting, the hydro-omic acid treatment was resumed. Within two ys the patient was better, and rapidly regained her st ground.

3955. *Strahan on the Action of Paraldehyde.*—In e *Lancet*, Jan. 1885, p. 201, Dr. J. A. K. Strahan ontributes a note on the action of the new hypnotic, araldehyde. The author states that he has given e drug in cases of mania, acute and chronic, in elancholia and dementia, in cases of restlessness, and simple insomnia, and has found it a most certain omniferent. It acts more quickly than chloral; nd, if it do not produce sleep, it does not excite. No headache or other unpleasant symptom is experienced on waking, and the appetite is not injured even by the daily administration of the drug for considerable periods. The dose is from 30 to 90 minims, but more than 60 drops is seldom required to induce sleep. It is more effective if given in small doses, to be repeated every hour than if taken in a single dose. The taste can be well concealed by a few drops of tincture of orange. The drug is given off rincipally or wholly by the lungs, and may easily e detected in the breath for twelve hours or more.

3956. *Halpin on Hazeline in Hæmorrhage from Bowel.*—In the *Brit. Med. Jour.*, Jan. 1885, 27, Mr. R. Halpin narrates the following case, strating the value of hamamelis virginica in the tment of hæmorrhage. A man, aged 44, had n the subject for eight years of bleeding from rectum. The hæmorrhage was periodic, coming n alternate months, lasting four weeks at a time. blood was passed in the morning, immediately r the bowels had been relieved, and amounted to t two ounces. On examination, he was found from piles, fistulæ, &c. In Nov. 1884 he was itted into the Royal Hospital for Thoracic ase, and was found to have tried nearly every in the *Pharmacopœia*, but the hæmorrhage continued. The author decided to try hazeline, accordingly injected an ounce diluted with a l quantity of water into his rectum, giving at ame time half a drachm by mouth every three s. The bleeding was at once arrested, and, ogh the patient remained for some weeks under rvation, there was no return of the hæmorrhage.

957. *Startin on Lupus Cured by Sodium ylate.*—In the *Med. Press and Circular*, Feb. 5, p. 153, the value of treating lupus by the lication of sodium ethylate, as described by B. W. Richardson in 1878 (*vide Medical Digest*, t. 66 : 3), is confirmed by Mr. Startin, who showed the Medical Society several cases cured by this ans. Dr. Richardson's original papers may be nsulted in the *Lancet*, vol. ii., 1878, p. 656, and l. i., 1881, p. 243 (*vide* LONDON MEDICAL RECORD, 79, p. 39).

3958. *Kingsbury on a Case of Asthma produced by a Linseed Poultice.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 278, Dr. G. C. Kingsbury writes that he was called in a few days previously to see a female, aged 32, who was suffering great pain from an ulcer over the right tibia. The ulcer communicated with a piece of necrosed bone, and, as the patient refused surgical interference, the author ordered a linseed-meal poultice. The patient strongly objected, saying that for the last four years she had an attack of asthma each time a linseed-meal poultice had been used. This not being credited, the poultice was insisted upon and applied. Three hours later Dr. Kingsbury was summoned, and found his patient livid and gasping for breath, and suffering from as severe an attack of asthma as he had ever seen. The poultice was removed, and the attack gradually subsided. The patient cannot bear to have a linseed poultice made near her, even though not for her own use, as she at once feels a tightness in her chest. [In the *Medical Digest*, sect. 454 : 3, a linseed-meal poultice is stated to have caused urticaria, a fact interesting in connection with Sir Andrew Clark's statement at the Clinical Society, Jan. 9, that he believed spasmodic asthma to be a sort of urticaria of the bronchial mucous membrane.—*Rep.*]

RICHARD NEALE, M.D.

3959. *Von Jaksch on the Use of Thallin and its Salts.*—Thallin is a basic substance which has been prepared synthetically by Skraup, of Vienna, and investigated by the author (*Wien. Mediz. Wochensch.*, 1884, No. 48). The tartrate and sulphate are soluble in water and have a strong bitter and aromatic taste. The addition of perchloride of iron to the solution produces an emerald-green colour, to which thallin owes its name. The salts of thallin possess well-marked antipyretic and germicide properties, and can be given in doses of from 4 to 12 grains. The lowering of the temperature begins after two or three hours, and is maintained for four or five. The reappearance of the fever is generally accompanied by profuse sweating and by shivers. Thallin does not seem to possess any specific property, but it may be useful in cases where quinine and salicylic acid fail to produce the desired effect.

3960. *Binz on Inhalation of Ozone.*—According to the author (*Berl. Klin. Wochensch.*, 1884, No. 12) the inhalation of ozone by dogs, cats, and frogs is followed by a short sleep and by a diminution of the temperature of the body. When the inhalation is continued for a long time, acute catarrh of the respiratory tract supervenes. In man the effect is the same, and sleep is produced in about fifteen minutes. On awaking, there is generally a feeling of cold and fatigue which soon passes off. Air containing much ozone causes symptoms which resemble those of the *mal des montagnes*. The author thinks that the good effects of treatment on the mountains or near the sea may be partly ascribed to the presence in the air of a large quantity of ozone.

3961. *Bernheim on the Treatment of Subacute Rheumatism by Antipyrin.*—In ten cases of subacute rheumatism, the author (*Gaz. des Hôp.*, 1885, No. 26) has given antipyrin in doses of 2 grammes every hour until 6 or 8 grammes have been taken. In all these cases the pain disappeared very rapidly, but relapses were frequent, and the treatment had to be resumed after two or three days. The author is not prepared to say that the duration of the disease is shortened, and he has not yet tried the effect of antipyrin in very acute cases; but the rapid disappearance of the pain was constantly striking.

3962. *Mingazzini on the Action of Antipyrin combined with Kairin.*—A mixture of these two substances has been administered by the author (*Gazz. degli Osp.*, Dec. 28, 1884) in several cases of phthisis, pneumonia, enteric fever, &c. He is of opinion that the mixture is advantageous, for the lowering of the temperature is more marked, and lasts longer; unpleasant effects, on the other hand, are distinctly diminished.

3963. *Chéron on the Treatment of Cervical Endometritis.*—According to the author (*Revue de Thérap. Médico-Chir.*, 1885, No. 5) iodine is the best local remedy, but the tincture does not always act well. It is better to use at first a solution of iodide of potassium (gr. 150) and iodate of potash (gr. 15) in 2 ounces of water, and immediately after another composed of 150 grains of citric acid in two ounces of water. The second solution decomposes the first, and iodine becomes free. This application must be repeated two or three times a week.

3964. *Leyden on the Treatment of Sclerosis of the Coronary Arteries.*—The author has published in the *Centralbl. für die Ges. Therapie* (November 1884) the plan of treatment which he adopts in these cases. He recommends first of all some hygienic precautions, such as moderate diet and exercise, and the avoidance of hard work and violent emotions. Some weeks may be spent very profitably every year at Carlsbad, Marienbad, or Kissingen. When the symptoms of angina pectoris have appeared, the treatment must be directed chiefly against them. During the paroxysm complete rest is essential, and means must be taken to prevent paralysis of the heart; hot drinks, champagne, camphor, ether, musk, valerian, &c., are all useful, while digitalis and bromide of potassium are dangerous. The former, however, is to be given when there is œdema of the lungs, and when the arterial tension is much diminished. Narcotics must generally be avoided, but an exception can be made in favour of morphia, which is useful when there is much dyspnœa. Inhalations of chloroform and ether have not yet been proved to be exempt from danger. Inhalations of nitrite of amyl give excellent results, but only when the vessels are contracted. As for the nitrite of sodium, Professor Leyden has not seen any benefit from its use. When the quantity of urine is diminished, saline diuretics, scilla, and caffeina are indicated. Warm baths often do more harm than good, but a poultice on the chest is generally agreeable to the patient.

3965. *Kalb on the Treatment of Typhoid Fever by Inunctions of Mercurial Ointment.*—The author states (*Annales Méd.-Chir.*, 1885, No. 1) that he has obtained very satisfactory results by means of inunctions of mercurial ointment on the thighs and abdomen. He recommends rubbing in every day for six days 15 grains of the ointment. On the second day the temperature goes down, but only for a short time. On the tenth day 80 per cent. of the patients are free from fever.

3966. *Holz on the Treatment of Vomiting in Pregnancy by Cucain.*—In the case of a pregnant woman, aged 26, who was suffering from obstinate vomiting, M. Holz tried at first the usual remedies, but without success. He then gave his patient ten drops of a three per cent. solution of cucain, and the vomiting ceased at once for several hours. After three doses it disappeared entirely. J. S. Keser, M.D.

3967. *Johansohn on Russian Vaseline.*—In the *Pharmatzevtitchesky Jürnal*, No. 1, 1885, p. 1, Mr. Edwin Johansohn, of St. Petersburg, details the results of his analytical investigations referring to three specimens of Russian vaseline and one of 'petroleum vaseline' (jelly), prepared by the Chesebrough Manufacturing Company. On the whole the author thinks that, in a not very remote future, the Russian drug will compete with the American preparation as successfully as Russian petroleum has already begun to do with American petroleum. The best Russian vaseline is quite white, melts at 43° C. to 44° C., is more consistent than the American article, and its specific gravity at 15° C. is 0·8520. A residuum after evaporation of a filtered mixture of 3·0 of vaseline with 30 cubic centimètres of a 95 per cent. alcohol amounts to 0·4138 grammes, and presents a fluid free from any odour. Under the microscope, Russian vaseline shows the presence of numerous stellated and radiated crystalline groups. It contains a much smaller quantity of acids than American vaseline.

3968. *Semtchenko on the Use of Cucain in Diseases of Children.*—In the *Vratch*, No. 7, 1885, Dr. D. G. Semtchenko states that he applied a 2 per cent. solution of hydrochlorate of cucain in seventeen cases of coryza in infants, aged from two weeks (eight cases) to eleven months. Fourteen little patients suffered from acute nasal catarrh, the remaining three from a chronic form. The solution was instilled into the nose, two drops at a time, six times in twenty-four hours. All the patients completely recovered within from one to four days. Striking relief of the symptoms, however, was observed within five or ten minutes after the first instillation, the infants being enabled to take the breast quite easily and freely. From the beginning of the treatment the nasal discharge lessened (but in one of the cases a short temporary increase of the secretion was noted); the mucous membrane became somewhat paler and less swollen. In one of the cases the patient once vomited soon after the instillation, in consequence of the cucain flowing down into the fauces. To prevent this rare accident, the author advises that cucain be used in the form of an ointment. He followed the same plan, with identical results, in cold in the head in a girl, aged 4, and in himself. A 4 per cent. solution, four drops at a time, was used. Finally he administered a 2 per cent. solution of cucain internally in several cases of vomiting and diarrhœa in children. Sickness disappeared, the patients soon fell asleep, and on awakening looked and felt stronger and more cheerful.

3969 *Babaieff on Cucain.*—Dr. A. N. Babaieff, of Tiflis (*Proceedings of the Caucasian Medical Society*, No. 12, 1884), administered cucain internally in a case of virile impotence depending on neurasthenia; the results were negative. Two-grain doses brought about intense cardiac palpitation. In a case of tuberculous ulcers of the larynx, a single painting with a 2 per cent. solution of hydrochlorate of cucain removed hyperæsthesia of the parts to such an extent as to enable him to make a laryngoscopic examination, but in ten minutes the larynx became as over-sensitive as ever. V. Idelson, M.D.

3970. *Ckiandi-Bey and Others on Disulphide of Carbon.*—Ckiandi-Bey (*Compt. Rend.*, tome xcix., p. 509), who has had twenty years' experience among workers in carbon disulphide, has never observed any form of paralysis induced by it, nor any loss of sexual power in men. Its application to the skin is, whilst the liquid is evaporating, very painful. The only disagreeable effects of a copious inhalation of its vapour was headache, which soon passes off. By agitation with water in perfectly filled vessels a solution was obtained containing 1 in 2,000 of the disulphide (35 grains or ʒss. per gallon). The solution acts as a powerful antiseptic, arresting all fermentations and killing all microbes. It has been found to be useful in cholera and typhoid, both internally and externally, and in the form of spray. The taste of the solution is not unpleasant. E. Peligot (*Ibid.*, p. 587) finds a much greater solubility of the disulphide. For medical use, the disulphide should be purified by shaking it with mercury till no more mercuric sulphide forms, and then redistilling. Ach. Livache (*Ibid.*, tome xcvii., p. 249; and tome xcix., p. 697) finds that by operating with a 15 per cent. solution of soap containing petroleum, a 20 per cent. pseudo-solution of disulphide can be obtained, and this can be diluted *ad libitum* without precipitating the disulphide. It is a solution which Berthold has termed a pseudo-solution.

Thos. Stevenson, M.D.

3971. *Renzone on the Principal Antipyretic Drugs and the Mode of Recognising them in the Urine.*—Quinine gives a white precipitate with tannic acid; with solution of iodide of potassium and mercury (Tanret) it gives an abundant yellowish white precipitate; with solution of iodide of potassium and iodine a brownish yellow or chestnut brown. The presence of salicylic acid, carbolic acid, resorcin, and kairin is shown by the addition of solution of the perchloride of iron (no reaction with quinine), which gives rise to a reddish brown, wine-coloured, violet, smoky, or bluish colour. If, on the addition of sulphuric acid, the colour become clear red, kairin is present; if the colour obtained with the perchloride disappear on the addition of sulphuric acid, salicylic acid or resorcin is present. Carbolic acid with nitric acid gives a blood-red brown colour and precipitate, with lively effervescence. Resorcin and salicylic acid are unaffected. Caustic potash added lastly in excess gives a golden yellow flocculent precipitate with resorcin; with salicylic acid the original violet colour partly returns. If the urine be diabetic, to avoid error, it is well to boil it to drive off volatile products, such as acetone, which would falsify the reaction with the perchloride of iron.

G. D'Arcy Adams, M.D.

3972. *Nieske on the Calorific Properties of Sodium Salts.*—M. Alwin Nieske, chemist at Dresden, describes several heating apparatus for medical appliances and domestic purposes, the principle of which consists in the storage of latent caloric by means of solid sodium salts liquefied by heat. These salts produce when liquefied a large quantity of heat, a property which they do not possess in solid state; *e.g.* the quantity of heat in acetate of soda is four times greater than in water. It is due to the enormous quantity of heat, which is given off again, as the salts resume the solid state. This property is applied to various useful apparatus (filled with acetate of soda and hermetically soldered), which, having been warmed by placing them for a short time in boiling water, will retain the heat for many hours in proportion to their size, and, when commencing to cool, will only require to be shaken, whereby the crystallisation of the salt is interrupted, to continue producing heat. Larger apparatus, as foot-stools, warming-pans for beds (instead of hot-water-bags, over which they have the advantage of not leaking), will remain hot for twenty hours and upwards. M. Nieske has also constructed on the same principle portable chest-, throat-, and abdominal-warmers, and dish- and plate-warmers. Besides, he uses carbonate of soda as a cheap fuel for portable perfectly smokeless stoves without chimneys). A bag of 'carbon-natron' will supply fuel for two months at the expense of about 1½*d.* daily. Smaller stoves are particularly adapted for heating baths into which they are immersed, and will warm the water in less than an hour. Twenty-five large baths may be heated with one bag of the carbon-natron at the cost of 3*s.* The stoves are half filled with small pieces of the fuel, on which a few lumps of the carbon soda are placed, either ignited by an ordinary match or by having them previously made red-hot over a fire. Flat-irons constructed in the same manner have lately become very popular in laundries in Germany. Messrs. Krohne & Sesemann, surgical instrument makers, 8 Duke Street, Manchester Square, W., are the agents for England to the Carbon-Natron Heitz Company (Carbon-Natron Heating Company) of A. Nieske at Dresden, and keep all these apparatus in stock.

F. A. Junker, M.D.

3973. *Mya on the Influence of Nitrite of Amyl on the Urine.*—An anæmic boy, subject to severe attacks of headache, was treated with frequent inhalations of nitrite of amyl. Dr. Mya then observed that, directly the urine was passed, crystals of free uric acid were spontaneously deposited. Further investigations with proper precautions undertaken upon this patient, as well as upon others, showed that nitrite of amyl, whether taken internally or inhaled, increases in a marked degree both the amount of urine passed, and the quantity of uric acid and urea excreted. The author has since found that Professor Rossbach, of Jena, had been using nitrite of amyl and nitro-glycerine with kindred results. Professor Rosenthal also had used a solution of nitrite of amyl (three drops in half a litre of water) as an antiseptic for washing out paralysed bladders. Professor Dittel, too, had used this wash. The author sums up the matter by saying that the generally recognised actions of nitrite of amyl on the urine are (1) that it increases the quantity passed, and (2) that when injected into animals, or when inhaled in large doses, it produces glycosuria. In addition to this, the author alleges that he has established (1) that the increase of urine is accompanied by a proportionate increase in the two chief nitrogenous constituents—urea and uric acid; (2) that Trommsdorff's method gives the reaction of nitrous acid with the urine of those who have been taking nitrite of amyl largely for some days—a reaction the author has never observed in other normal or pathological urines; (3) that in Bright's disease there is, under the influence of nitrite of amyl, a remarkable daily increase in the quantity of urine and diminution in the amount of albumen, œdema at the same time decreasing. The author mentions with approval Professor Rossbach's view that the good effects of nitro-glycerine (which, like nitrite of amyl, lowers the arterial tension) show that the high tension and the hypertrophy of the left ventricle, so far from being compensatory in atrophy of the kidney, should be regarded as morbid elements, the diminution of which improves the condition of the patient. Dr. Mya ascribes the benefit to increased facility of circulation in the kidney. Professor Rossbach regards the prolonged use of nitrite of amyl as dangerous; and he prefers nitro-glycerine. Dr. Mya, on the contrary, has never seen any ill effects, except transient headache, from inhalations of two or three drops of nitrite of amyl every hour, or sometimes every half-hour, for several days; and this, although three boys and two extremely anæmic persons were comprised amongst the patients.

WILLIAM R. HUGGARD, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

3974. ARNOLD.—A Case of Tetanus after Abortion. (*Deutsche Med. Zeitung*, November 1884.)

3975. ATLEE.—The actual State of our Knowledge as to the Relations between Eczema of the Nipple and Malignant Tumours of the Breast. (*Amer. Jour. of Med Sciences*, 1884.)

3976. VON LANGSDORFF.—Pregnancy in a Case of Rudimentary Uterus Bicornis. (*Gynäkolog. Centr.*, Band vii., 46, p. 734, 1883.)

3977. RUGE.—Pregnancy in Cases of Uterus Septus. (*Zeitschrift für Gebürtshülfe und Gynäkolog.*, Band x., p. 141, 1884.)

3978. SOTCHAVA, N. A.—On the Influence of Diphtheria on Pregnancy. (*Vratch*, No. 52, 1883, pp. 823-24.)

3979. VADENUKE, ALEXANDER.—On the Action of Quinine on the Intra-uterine Fœtus. (*St. Petersburg Inaugural Dissertation*, 1883, p. 72.)

3980. SAZONOVA, MARIA GAVR. — On Hæmatoma (Thrombus) Vulvæ et Vaginæ Developed during Labour. (*Russkaia Meditzina*, No. 37, 1884, pp. 754-7; and No. 38, pp. 774-7.)

3981. BRITAN, A. J.—On Ovariotomy in Pregnancy. (*Vratch*, No. 1, 1885, pp. 1-4.)

3982. VOLKOVA, MARIA M.—On the Use of Cucain in Gynæcological Practice. (*Russkaia Meditzina*, No. 48, 1884, p. 1004.)

3983. EVANS.—A Case of Labour Complicated with Ventral Hernia. (*Brit. Med. Jour.*, Feb., p. 437.)

3984. GOODELL.—On Coccygodynia. (*Philadelphia Med. Times.*)

3985. MASSON.—Prolapsus Uteri and Pregnancy. (*Brit. Med. Jour.*, Feb., p. 377.)

3986. BREUS.—The Prevention and Treatment of Eclampsia by Warm Baths. (*Archiv für Gynækol.*, Band xxi.)

3987. GALCERAN.—Uncontrollable Vomiting in Pregnancy Cured Instantaneously by Ether-spray to the Epigastrium. (*Gass. Med. Cat.*, 1884.)

3988. VON GUGGENBERG.—A Case of Self-performed Cæsarean Section. (*Wiener Med. Blätter*, Jan. 15.)

ART. 3974. *Arnold on Tetanus after Abortion.*—The patient (*Deutsche Med. Zeitung*, November 1884), was a young woman, aged 26. Abortion occurred at the third month of gestation. The ovum was expelled entire. Eight days later the patient got up; the day after this she caught cold at an open window, and her face became swollen, with slight toothache; three days after this she was unable to open her mouth; the same night cramps in the neck and upper dorsal region appeared. These were followed by trismus, opisthotonos, and death. The necropsy showed a fatty heart and liver, with endometritis. In the opinion of Arnold, the tetanus arose from the hæmorrhage which followed the expulsion of the ovum. Arnold states that violent hæmorrhages, which render necessary the use of the vaginal plug, are provocative of tetanus. Werner is cited as relating two fatal cases of tetanus, one after abortion, the other following a natural labour in which there was severe hæmorrhage.

3975. *Atlee on the actual state of our Knowledge as to the Relations between Eczema of the Nipple and Malignant Tumours of the Breast.*—Atlee passes in review (*Amer. Jour. of Med. Sciences*, 1884) the observations cited by Butlin, Morris, Paget, and others, in which an eczema of the nipple had preceded by several years the development of malignant tumour of the breast. The researches of Atlee lead him to conclude that there is an affection of the nipple and areola resembling eczema, but differing from it clinically and microscopically. This affection reaches the galactophorous ducts and becomes a true cancer of the breast. The author recalls the fact that Nélaton published cases of this kind in 1855.

FANCOURT BARNES, M.D.

3976. *Von Langsdorff on Pregnancy in Abnormal Development of the Uterus.*—Dr. Von Langsdorff, of Emmendingen, attended a short but very well-proportioned woman in her first confinement. The child lay in the first position. As the pains were weak, and had made no progress after twenty-four hours' labour, the forceps was applied, and severe *post partum* hæmorrhage ensued. The fundus uteri appeared to lie high above the pubes, and was found to be much distended and divided by a groove into two crescentic halves. On manipulation, after Credé's method, the placenta could not be removed. Dr. Langsdorff therefore passed his hand along the umbilical cord, and reached the placenta in the left division of the fundus, finding that it was connected by an isthmus with a second placenta in the right half of the fundus. After great difficulty he succeeded in extracting both placentæ with the membranes. From each arose a cord which united with its fellow. In a short time the uterus began to contract, and during recovery parametritis on the right side occurred, but was speedily cured.

3977. *Ruge on Pregnancy in Uterus Septus.*—Dr. Ruge observes that Schröder and others have confuted the once prevalent opinion that women with double uteri must necessarily be barren. In all degrees of uterus septus pregnancy may occur; but labour is frequently complicated by feeble contractile power of the abnormal uterus, hæmorrhage, and retention of the membranes. The non-gravid half of the uterus enlarges during pregnancy, and a decidua also develops within it, though in many cases this fact has not been recorded. Dr. Ruge has met with a case of pregnancy in the right half of an uterus, which was divided by a septum from the fundus to the internal os. The placenta was entirely and solely attached to the septum. The ovum aborted at the eleventh week through the patient being subjected to violent physical exertion, but she had previously been delivered at full term. In a second case, under Dr. Ruge, a woman aborted at the sixth month of her first pregnancy. In withdrawing a fragment of placenta, he found that a septum reached from the fundus to the internal os, it was so closely applied to the wall of the uterus that it was only discovered by accident. A decidua was not found in the other half. After the lapse of several months, during which period the catamenia were profuse but regular, the patient once more became pregnant. After repeated hæmorrhages, labour was again premature, and the child died shortly after birth. The placenta came easily away, and the division of the uterus could then be readily explored. A decidua was expelled from the non-gravid cavity. As it was considered reasonable to believe that the abnormal condition of the uterus was the cause of the two miscarriages, Professor Schröder divided the septum by means of scissors. No hæmorrhage resulted. The right half of the uterus proved to be longer than the left. A short time afterwards the patient conceived, and was delivered of a living child at full term. ALBAN DORAN.

3978. *Sotchava on Diphtheria in Pregnant Women.*—In the *Vratch*, No. 52, 1883, p. 823, Dr. N. A. Sotchava, of Kharkov, details three cases of the occurrence of diphtheria in the sixth, third, and fourth months of pregnancy. All the patients recovered in fourteen or eighteen days; but one of them, in the fourth month of pregnancy, aborted on the fourth day after the appearance of the first symptoms of the disease. In her case, the temperature on the third day was as high as 40°·2 C. (104°·36 Fahr.), while in the other two patients the highest temperature registered was 39°·2 C. (102°·5 Fahr.). The author thinks that pregnant women must be most strictly isolated from diphtheritic patients.

3979. *Vadenuke on the Action of Quinine on the Intra-uterine Fœtus.*—Dr. A. Vadenuke (*St. Petersburg Iuaugural Dissertation*, 1883) made sixty-five observations on parturient and five on pregnant healthy women. The former received from one to two grammes of sulphate or muriate of quinine during labour, and the latter from half a gramme to two grammes a certain time before the term of expected labour. Then the urine of the new-born child was examined in regard to quinine. The results at which the author arrived are these. 1. Quinine taken by the mother goes over into the fœtal system with relative rapidity, and in considerable quantity (about one-ninth of the quantity taken by the mother). 2. The maximal quantity of the drug accumulates in the fœtal body by the end of two hours after its administration to the mother. 3. The intra-uterine fœtus eliminates quinine within a little more than forty-eight hours, and the new-born child within seventy-two hours. 4. Single large medicinal doses of quinine, given to pregnant and parturient women, are absolutely free from danger to the fœtus. 5. The repeated administration of large medicinal doses of quinine, at intervals of forty-eight hours, to pregnant women, is not accompanied by any danger to the fœtus. 6. Quinine is not an abortive agent. 7. It may prevent abortion or premature labour, when the latter threatens, in consequence of high fever or malarial infection of the mother. [For valuable references on the subject, *vide* Dr. R. Neale's *Medical Digest*, sect. 40 : 6.—*Rep.*]

3980. *Sazonova on Hæmatoma of the Vulva and Vagina.*—In the *Russkaia Meditzina*, No. 37 and No. 38, 1884, Dr. Maria Gavr. Sazonova, superintendent of the Kolomensky Town Lying-in Hospital, in St. Petersburg, describes at considerable length the case of a strongly built and healthy primipara, aged 24, with a normal pelvis, in whom, during twin labour, hæmatoma of the vagina developed itself in about three-quarters of an hour after the first child had been born. When first noted, the tumour was situated at the left half of the posterior vaginal wall close to the perinæum, and had the size of a hen's egg. The tumour rapidly increasing, and thus threatening to become a serious impediment to the forthcoming second labour, Mrs. Sazonova ruptured the membranes, and performed podalic extraction of the second child. The hæmatoma went on increasing, spread into the left labium majus, changed its colour from dark-blue to nearly black, and became very tense. On examination, it was found now occupying the whole lumen of the vagina, and pushing the vaginal portion of the womb upwards out of reach of a finger. On the eighth day after the labour, the tumour burst spontaneously. On the eleventh day the cavity of the hæmatoma was almost free from coagula, and considerably diminished in its dimensions. A month after the labour, the patient left the hospital in a satisfactory state. The temperature (which on the third day reached as high as 40° C.) and pulse became normal by the twentieth day. The author was able to find in literature only five other cases of the formation of hæmatoma of the vagina and vulva during twin labour within the period intervening between two deliveries. These cases were published by Baudelocque, Schneider, Ané, Hugenberger, and Scanzoni; only Schneider's case ended in recovery; the remaining four died from pyæmia or septicæmia on the 51st, 40th, and 8th day. According to the author, the number of all cases of thrombus vulvæ et vaginæ published up to the date amounts only to 85.—[The author's table is incomplete. Anglo-American literature remains untouched by her. For the English cases, *vide* Dr. Neale's *Medical Digest*, sect. 1,095 : 2, and 1,096 : 5. —*Rep.*]—In regard to the treatment, the author insists on leaving hæmatoma alone and on completing the labour (by version and extraction of the second child) immediately after the formation of the tumour has been observed. The article contains also a report of Dr. Jastreboff's case of hæmatoma. [This was in a primipara, aged 24. The tumour was first noted an hour after the labour; it burst twice; the fever was high (40° C.) for the first two weeks; the patient recovered by the end of three weeks.] Of formerly published Russian cases, Dr. Sazonova refers to eleven cases of Hugenberger, in the *St. Petersburg Med. Zeitschr.*, 1865, vol. ix.: to four cases in the *St. Petersburg Lying-in Hospital's Reports* for 1840–1871; to one case, *ib.* for 1873–76; to six cases, *ib.* for 1877–80; to one of A. Lebedeff, in the *Gavansky Lying-in Hospital's Reports* for 1876–78; and to one case of Dr. J. Grammatikaty, *ib.* for 1882.

3981. *Britan on Ovariotomy in Pregnancy.*—In the *Vratch*, No. 1, 1881, p. 1, Dr. A. J. Britan, of Moscow, describes a case of ovariotomy performed by Professor N. V. Sklifosovsky on a married woman, aged 40, in about the sixth month of her eighth pregnancy. On opening the abdomen, about 3,000 grammes of serous fluid escaped. The cyst consisted of a number of individual cysts varying in size from a pea to a man's fist, and filled, some with semitranslucent gelatinous substance, other with colloid matter, and again other with fluid of chocolate colour. The tumour was attached by means of a thick pedicle, about 5 or 6 centimètres long, to the right ovary, and was slightly glued on to the intestines and omentum. It weighed abôut twenty pounds. The pedicle was returned into the abdomen. The toilette of the peritoneum took a considerable time. A large drainage-tube was introduced into the lower corner of the wound. The operation lasted seventy minutes. Within twenty-four hours the patient aborted. On the sixth day, the drainage-tube and silk sutures were removed. The highest temperature (37°·9 C.) was read on the sixth day. On the twenty-first day, the patient left the hospital quite well. The occurrence of abortion is ascribed by the author—1, to the length of time taken by the operation, the womb being long in contact with the air; 2, to the prolonged toilette of the peritoneum; and 3, to the irritation inflicted on the womb by the drainage-tube. We may add as well that two weeks before the operation a sound was introduced into the womb (nevertheless, the presence of pregnancy remained unsuspected). The author mentions five other cases of ovariotomy during pregnancy, performed by Russian surgeons. They are—1, Dr. Kuznetzky's case, in the *Ejened Klin. Gazeta*, Nos. 4 and 5, 1881. The patient was successfully operated in the fourth month and safely delivered at full term. 2, Professor N. V. Sklifosovsky's case in the *Vratch*, No. 9, 1883, p. 132. The patient, aged 35, was successfully operated in the fourth month of her ninth pregnancy. On the thirty-fifth day after the operation she aborted. 3, 4, and 5, Professor V. F. Snegireff's cases. The first patient, multipara, operated in the fourth month (in 1878, without Listerian precautions), died on the fourth day from general septic peritonitis. The second patient, operated on in the sixth month, recovered, but aborted on the second day after ovariotomy. The third was operated in the second month; no abortion followed, and the patient is now reconvalescent. [In the LONDON MEDICAL RECORD, April 1883, p. 151, a case of Professor von Wahl (of Dorpat) may be found. For valuable references on the subject *vide* Dr. Neale's *Medical Digest*, section 1161 : 2.—*Rep.*]

3982. *Volkova on Cucain in Vaginismus.*—In the *Russkaia Meditzina*, No. 48, 1884, p. 1004, Dr. M. Volkova, of Professor A. J. Lebedeff's clinic in St. Petersburg, details the case of a lady, aged 24, who for eight years of her married life suffered from severe vaginismus, every coition being accompanied by intense pain, swelling of the vulva, hysterical fits with subsequent contraction of the limbs, and trismus. On most gently touching the congested myrtiform caruncles or the anterior wall of the vagina, agonising pain and spasm of the sphincter vaginæ occurred. The introduction of a finger into the vagina brought about spasms of the levator ani, flushing of the face, and general excitement. The introduction of a speculum was followed by a hystero-epileptic fit, with subsequent contraction of the muscles for several days. It was decided to relieve the patient's state by the excision of the remnants of the hymen, at the same time using the occasion for giving a trial to cucain, as recommended in similar cases by Fraenkel. Accordingly, the whole entrance of the vagina was for twenty minutes painted with a 20 per cent. solution of cucain (after Fraenkel's formula : ℞ Cucaini muriat. 1,0 ; Spiritûs vini rect. 2,0 ; Aquæ dest. 3,0), and for the next five minutes a cotton-wool plug soaked in the same solution was applied. Only an extreme paleness of the mucous membrane, but no anæsthesia appeared. On the contrary, the patient even complained of an increased tenderness of the parts, and, eventually, it proved necessary to perform the operation under chloroform. V. IDELSON, M.D.

3983. *Evans on a Case of Labour Complicated with Ventral Hernia.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 437, Mr. W. H. Evans states that he was called to a case of labour, and discovered that the patient was suffering from a hernia situated in Douglas's pouch. Labour occurred at full term, and with each pain the hernia protruded. This the author reduced in an interval of rest, and terminated the labour by forceps. The patient did well.

3984. *Goodell on Coccygodynia.*—In the *Philadelphia Medical Times* Prof. Goodell dwells especially on the necessity of diagnosing whether a patient with coccygodynia is suffering from some injury to the coccyx, or whether the symptoms are due to hysteria. If the pain be due to injury of the coccyx and its ligaments, then it is often necessary to extirpate the bone, since nothing less will give relief. In cases where the pain is due to hysteria, the patient does not show signs of suffering in her face, nor does she complain when the coccyx is examined, but rather before the parts are touched; whereas in the true disease the patient does not complain until the coccyx is pressed upon, when the slightest touch causes excessive pain. The remedies suggested are suppositories of iodoform (three to five grains), or of belladonna, but opium should be avoided. The general health should be improved, and the patient put to bed, but fed freely. In the way of tonics, some preparation of iron is generally beneficial, the best being the reduced; it is often well to combine it with arsenic. Many of these cases cannot bear strychnia during the early part of the treatment, as the nerves are too sensitive for anything which makes an impression upon them.

3985. *Masson on Prolapsus Uteri and Pregnancy.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 377, Mr. G. B. Masson narrates the following case. One evening he was suddenly sent for to a woman, a multipara, for a miscarriage; the patient was in a semi-collapsed condition, and the uterus was extremely prolapsed. She had been pregnant four and a half months, and the uterus had been falling by degrees until the third month. Mr. Masson, with some difficulty, replaced the organ and then plugged, giving small doses of ergot, opium, and iron during the night. Next evening he was again sent for, and found the plug expelled. Very soon afterwards a horribly offensive fœtus was born. The placenta followed quickly, and the parts were well washed with Condy's fluid. The patient made a good recovery, and on the twelfth day was able to wear a ring-pessary. RICHARD NEALE, M.D.

3986. *Breus on the Prevention and Treatment of Eclampsia by Warm Baths.*—The author has given in the *Archiv für Gynækol.*, Band xxi., No. 1, the result of his observations in seventeen cases, two of which ended fatally. He recommends putting the patient in a bath at 38° C., and to raise the temperature of the water gradually until it reaches 41° C. After that, the woman is wrapped up in blankets, and abundant perspiration sets in. When albuminuria exists during pregnancy, a course of warm baths may prevent the occurrence of convulsions at the time of confinement.

J. S. KESER, M.D.

3987. *Galceran on Uncontrollable Vomiting in Pregnancy Cured Instantaneously by Ether-spray to the Epigastrium.*—A young and delicate primipara began at the second month to suffer from frequent sickness. Towards the fifth month, her state became alarming from the malnutrition caused by the uncontrollable vomiting. No drugs were of any avail. The application of ether-spray to the epigastrium was tried, with immediate benefit. After the first application the sickness ceased. Some time afterwards it occurred again, and again yielded to the spray. G. D'ARCY ADAMS, M.D.

3988. *Von Guggenberg on a Case of Self-performed Cæsarean Section.*—The following case was related by Dr. von Guggenberg, and the patient exhibited at the last annual meeting of Bohemian physicians at Tetschen (*Wiener Med. Blätter*, Jan. 15). On Sept. 28, 1876, he was summoned at 2 A.M. to see a woman who was said to have cut open her abdomen. He found the patient lying in a miserable house on a wretched and dirty bed, so anæmic and exhausted as to be unable to speak, although still capable of making signs. On removing a dirty petticoat which covered her, an incised wound was seen on the right side of the abdomen, passing downwards and inwards. Through this wound a somewhat large coil of intestine protruded, the greater part of which, covered with dried blood, rested upon a dirty blood-soaked straw sack. Hæmorrhage seemed to have ceased from every part of the wound, internal and external, and the uterus was contracted to the size of a child's head. A fully developed but dead male child lay between the patient's knees. There was no clean linen in the house, but some was procured from a neighbour, and, with a piece soaked in oil, the protruded intestines were carefully wiped and returned, and the wound sewed up, the peritoneum being included in the suture. The wound was about 9 centimètres (3½ in.) long, and somewhat S-shaped. It was dressed with a 5 per cent. carbolic solution, fixed on with strapping, and the abdomen carefully bandaged. By the afternoon the patient was well enough to speak, and the next day the history could be taken. She had had seven children previously, four of whom had been born without medical aid, two extracted with forceps, and one born after perforation of the head. The pains began between Sept. 24 and 25; they ceased in the afternoon, the abdomen becoming distended, and came on again on the 26th, when the midwife told her she could feel the presenting head through the vagina. On Sept. 27, according to the patient's account, convulsions came on, accompanied by agonising pain and great distension of the abdomen, the movements of the child ceasing from that time. The pain and distension increased, and became so severe that the patient, believing that she should die, and wishing to do so in a less painful way, determined to perform the Cæsarean section, of which she had heard. She therefore took a razor and divided the skin slowly, in order to avoid the intestines, and in the hope that she might yet live. She then cut through a second and a third membrane, and, as the child did not yet appear, made another cut, which caused a large jet of blood to issue from the wound, and laid bare a dark mass, which she recognised as the placenta, and removed. One foot of the child then came into view, which she seized, and pulled upon until the whole of the body came through the wound, the head requiring the exertion of all her force. She recognised that the child was dead, but she divided the umbilical cord, laid the child beside her on the bed, and threw the placenta on the floor. She then laid herself back to die, but soon heard voices. She had passed neither urine nor fæces since Sept. 24. The progress of the case was very good; urine was passed on the afternoon of the 28th, but the first stool not till Oct. 2. The pulse reached 120 on the day after the injury, but was never again so frequent. The temperature is not given in figures, but is stated to have been not very high, and although there was a considerable amount of exudation from the wound, it had united by Oct. 3, on which day Dr. von Guggenberg was obliged to leave, and to hand the case over to a colleague. The patient soon returned to work—how soon is not mentioned—and has been ever since in perfect health. Dr. von Guggenberg's opinion is that a spontaneous but incomplete rupture of the uterus had taken place. [He does not, however, enter into the reasons of his opinion, or explain at what period he considers the accident to have occurred.—*Rep.*] ALICE KER, M.D.

PATHOLOGY.

RECENT PAPERS.

3989. SEHLEN.—A Study of Malaria. (*Fortschritte der Medicin*, 1884.)

3990. MAGUIRE.—The Micrococcus of Pneumonia. (*Brit. Med. Jour.*, December, p. 1126.)

3991. KRASKE.—The Origin of Secondary Cancerous Growths by Inoculation. (*Centralbl. für Chir.*, No. 48, 1884.)

3992. GRANCHER.—The Micro-organism of Ulcerative Endocarditis. (*Jour. de Méd. de Paris*, No. 25, 1884.)

3993. BOINET.—The Microbe of Parotitis Epidemica. (*Lyon Méd.*, March 1.)

3994. KUBASSOFF.—The Transmission of the Bacillus Anthracis from the Mother to the Fœtus. (*Gaz. Hebdom. de Méd.*, Feb. 13.)

3995. KUNDRAT.—Gastro-enteritis Favosa. (*Wiener Med. Blätter*, Dec. 4.)

3996. NICOLAIER.—Infective Tetanus. (*Deutsche Med. Wochensch.*, Dec. 25.)

3997. ARNING.—Sudden death from Perforation of the Stomach by a Fish-bone. (*Deutsche Med. Wochensch.*, Jan. 8.)

3998. TIZZONI.—Experiments on the Pathogenesis of Albuminuria. (*Gazz. degli Ospitali*, Jan. 7, 1885.)

3999. MARAGLIANO.—Researches on the Respiratory Capacity of the Blood in Cholera Patients. (*La Medicina Contemp.*, Dec. 1884, and *La Gazz. degli Ospitali*.)

4000. DAVIDE, C.—Studies on Cholera at Spezia. (*Gazz. Med. Ital. Prov. Venete*, Dec. 20, 1884.)

4001. BIZZOZERO.—Contribution to the Study of Leukæmic Products. (*Gazz. degli Ospitali*, Nov. 1884.)

ART. 3989. *Sehlen on Malaria.*—An abstract of an original communication by V. Sehlen, in the *Fortschritte der Medicin*, 1884, is given in No. 51 of the *Berliner Klin. Wochensch.* for 1884. The microscopic examination of the blood in a freshly febrile malarial case revealed micrococcus-like structures both in the red corpuscles and the plasma. Marchiafava and Celli (see *Fortschritte der Medicin*, 1883, p. 573, and table ii.) first described and depicted these micrococci, and showed them to be constant accompaniments of intermittent fever. Bacilli were not found in the blood, either in this or in other cases. Inoculations of cultivation-fluids with the blood of patients in the febrile stage caused whitish bacteria-growths, consisting of micrococci resembling those found in the blood. Besides these colonies, there were pale yellow vegetations which did not survive a third cultivation. No bacilli appeared in either kind. Inoculations of these cultivations into white rats produced no positive results. From the soil, the water, and the air of malarial localities, various kinds of bacilli and micrococci were developed and isolated by (Agar) cultivations, but the same kinds for the most part were found in non-malarial places. Micrococcus-colonies, similar to those developed from blood, both microscopically and individually, were constantly found in cultivations from the soil of malarial localities. No positive results were produced by inoculation into white rats, as before. The various kinds of *bacilli* found in these cultivations (to the relation of which to the schyzomycetes called by Klebs and Tommasi-Crudeli the 'bacillus malariæ' Sehlen does not refer) are not looked upon as the cause of malaria; but, as to the micrococci developed from the blood and soil, the author thinks further animal experiments are required before a positive conclusion can be drawn. Experiments were made on the effect of medicines upon the micrococci by mixing the drug with the blood before cultivation. Of the substances tried (sublimate 0·01 per cent., muriate of kairin 1·0, salicylate of soda 2·0, arsenious acid 0·01, eucalyptus extract—considered a specific in Italy—10·0, hydrochlorate of quinine 0·5 to 1·0 grammes), only the last mentioned prevented the development of micrococci.

E. J. Edwardes, M.D.

3990. *Maguire on the Micrococcus of Pneumonia.*—In the *Brit. Med. Jour.*, Dec. 1884, p. 1126, is published a paper by Dr. R. Maguire, in which he describes three specimens which illustrate the micrococcus of pneumonia, as recently described by Friedländer; one was a section of pneumonic lung; another a section of the kidney from a case of pneumonia; and the third a preparation of the sputum from a similar case. The germ is a somewhat oval body, sometimes found singly, but usually in groups of two, as a diplococcus. Often, too, chains of diplococci can be seen, but no true formation of zooglœa. In all the specimens examined by the author, the organisms were most numerous at the growing border of the pneumonia, that is, at the junction between the red hepatisation and the congestion; while in the grey hepatisation, none could be seen. Large numbers of diplococci were also found in the lymph-spaces beneath the inflamed pleura. The diplococci were found in the blood-vessels covering the walls of the alveoli, and in the alveolar exudation. The pneumonococcus possesses a capsule, but it is difficult to demonstrate. The cultivation of the pneumonococcus is characteristic; if it be grown on blood-serum, it assumes a nail-like shape, with a rounded head. The results of the injection of the germ into animals are peculiar: it is not able to reproduce the disease in rabbits, but mice and dogs are readily affected.

Richard Neale, M.D.

3991. *Kraske on the Origin of Secondary Cancerous Growths by Inoculation.*—In a recently published paper (*Centralbl. für Chir.*, No. 48, 1884), Professor Kraske, of Freiburg, points out that, whilst no trustworthy record exists of transmission of carcinoma from one human subject to another, several observations have been made which render it very probable that in one and the same individual secondary growths may be developed by a kind of inoculation, that is to say, by shedding of elements of a tumour, and direct implantation of these at more or less remote parts of the body. Such secondary growths, according to Virchow, are occasionally observed on the peritoneum in cases of gastric cancer implicating the serous coat of the stomach. An instance has been recorded of very probable inoculation of the inner surface of the cheek with the elements of a lingual epithelioma on the same side, and one also of supposed transmission of cancer from the back of the hand to the conjunctiva. Of great importance in this respect are the instances published by Klebs of squamous epithelioma of the stomach associated with epithelioma of the œsophagus, pharynx, and oral cavity. Klebs assumes that in these latter cases the secondary growths from the gastric mucous membrane had originated through implantation of elements shed from the primary tumour. Quite recently Professor Kraske has observed, in two subjects of cancer of the rectum, a remarkable form of extension of the disease, which he is disposed to regard as the result of inoculation. In each case, besides the primary tumour, which was seated high up in the rectum, there was also cancerous deposit on the mucous membrane near the anus, separated from the first growth by a wide extent of healthy surface. In one of these cases there were two such minor growths, and in the second case but a single growth. With regard to this case, the author states that it could not possibly have been one of simultaneous development of two primary cancerous growths. The smaller and inferior growth was seated on a portion of mucous membrane, which is covered by squamous epithelium and free from glandular structure; so, as it was of the columnar form of cancer, it could not have been developed from the epithelial elements of its place of origin, and must be regarded as a secondary growth derived from the tumour seated at a higher part of the rectum. It is very probable, Kraske holds, that the manner in which the cancerous disease had spread in each of these cases was by inoculation. To the view of any metastatic origin of the smaller growths may be opposed the dictum of Virchow, that every organ which has a great tendency to become the seat of a primary malignant tumour, shows but very little tendency to take on metastatic disease. Moreover, neither at the time of operation nor after considerable intervals (three months in one case, five months in the other) were any signs revealed which indicated the presence of metastatic tumours in any internal organ. The condition in each of these cases differed from that frequently observed in cancer of the breast, in which several smaller growths of varying size are scattered around the larger primary tumour. The larger cancerous growth in each case was not surrounded by any small growths; and, as has been stated, between it and the secondary deposits near the anus was a wide extent of perfectly healthy mucous membrane. These secondary growths near the anus were, it may be concluded, the result of development of living epithelial masses detached from the primary growth above, and implanted in the inferior part of the rectal mucous membrane, which, as it presents many small folds and pouches, and, in cases of cancerous disease, is almost always in a catarrhal and hyperæmic condition, presents a favourable nidus for the retention and nurture of any wandering particle of carcinoma.

W. Johnson Smith.

3992. *Grancher on the Micro-organism of Ulcerative Endocarditis.*—The following experiments have been lately reported by the author at the Société de Thérapeutique (*Jour. de Méd. de Paris*, No. 25, 1884). A patient, suffering from ulcerative endocarditis, having been admitted into the hospital, the author collected every day one drop of his blood, with the necessary precautions, and mixed it with sterilised cultivating fluid according to Pasteur's method. In all cases numerous zooglœa-colonies were developed in the flasks, and the same micrococci were found in the blood of the patient during life, and on the surface of the cardiac valves after death. In consequence of an accident, M. Grancher has not been able to try the effect of inoculation with the cultivated micro-organism.

3993. *Boinet on the Microbe of Parotitis Epidemica.*—Some years ago Messrs. Capitan and Charrin announced that they had found, in the blood and saliva of patients suffering from mumps, small spherical or rod-shaped organisms, which they were able to cultivate. Inoculations practised on dogs, rabbits, and guinea-pigs gave no definite effects. M. Boinet has recently made, in M. Chauveau's laboratory, a series of researches which have given the following results (*Lyon Méd.*, March 1, 1885). Blood taken from fifteen patients suffering from mumps contained a variable number of micrococci; these micro-organisms could be cultivated in beef-tea to which a little salt had been added; inoculations produced only local symptoms, such as induration, abscess, &c.

3994. *Kubassoff on the Transmission of the Bacillus Anthracis from the Mother to the Fœtus.*—According to the author (*Gaz. Hebdom.*, Feb. 13, 1883, p. 111), the virus always passes into the fœtus after it has been injected into the mother. His experiments on seventeen guinea-pigs have given uniform results, and the microbe was constantly found in the liver, spleen, &c., of the fœtus.

J. S. Keser, M.D.

3995. *Kundrat on Gastro-enteritis Favosa.*—The *Wien. Med. Blätter*, of December 4, contains the account of a lecture given by Prof. Kundrat at the meeting of the Royal and Imperial Society of Physicians on November 28, on a case which he describes as one of gastro-enteritis favosa. The patient was suffering from favus universalis on admission to the hospital, and died from exhaustion after the development of a phlegmonous swelling in the right popliteal space. The necropsy showed traces of habitual indulgence in alcoholic liquor, and, besides, a very unusual condition of the mucous membrane of the stomach and intestines. In the stomach, where the mucous membrane was rugated and marbled, were found numerous punctated erosions and yellow points and spots, and towards the pylorus a yellowish fibrous exudative membrane, firmly adherent to the injected mucous membrane. Masses of brownish mucus, of cadaveric odour, and mixed sparingly with fæcal material, were found in the large intestine, and also erosions of the mucous membrane, partly isolated, partly in groups, the edges of which were blackish, but not undermined. Similar appearances were noticed in other parts of the intestinal canal, giving the impression of having been caused by the presence of such a parasite as the favus germ. The fungus was, indeed, found in the exudation of the affected parts, differing from that found on the skin only by the threads being softer and the joints longer. Spores were also found; and the fungus was developed in such deep layers of the tissues, that it was impossible to imagine its presence to be due to accidental mixture of the germs with the contents of the stomach. The spores could easily find their way to the digestive tract by the mouth, seeing that the whole body of the patient was covered with favus, but their development depended on an unhealthy condition of the gastro-intestinal mucous membrane, which could be plainly seen to have been present in this case.

3996. *Nicolaier on Infective Tetanus.*—Herr A. Nicolaier communicates to the *Deutsche Med. Wochensch.* for Dec. 25 some observations which he has made in the Hygienic Institute at Göttingen on an infectious variety of tetanus. He found that he could produce a peculiar and unvarying succession of symptoms by inoculating mice and rabbits with small pellets of earth taken from particular situations, which he found, by microscopic examination, to contain a fine thread-like bacillus. The course of symptoms was in all cases the same; an incubation of from 1½ to 2½ days in mice, 4 to 5 days in rabbits, followed by stiffness attacking first one extremity and then another, beginning with the one nearest the site of the inoculation, and spreading over the body until opisthotonos was induced. Death occurred within twenty-four hours in mice, after about two days in rabbits. The same symptoms, only more rapid and energetic, ensued on inoculation with pus taken from an inoculated animal, or with any portion of such animal's body, and it could also be induced by the bacillus, after cultivation in suitable fluids. Herr Nicolaier came, therefore, to the conclusion that a bacillus exists in some soils, which induces tetanus when introduced into the bodies of animals; and he throws out the suggestion that its accidental presence in wounds may be the cause of some cases of tetanus in man.

3997. *Arning on Sudden Death from Wound of the Stomach by a Fish-bone.*—At a meeting of the Medical Society in Hamburg, on May 13, 1884 (*Deutsche Med. Wochensch.*, Jan. 8), Dr. Arning described a case where sudden death occurred immediately after breakfast. The bloodless condition of the body caused the suspicion of some internal hæmorrhage; and, at the necropsy, the pulmonary alveoli and bronchi contained blood, while the stomach and œsophagus were completely filled with a clot. A wound about two inches long, with suffused edges, was found in the posterior wall of the stomach, and near it a long pointed fish-bone which had caused the mischief.

Alice Ker, M.D.

3998. *Tizzoni on the Pathogeny of Albuminuria.*—The object of Professor Tizzoni's experiments was to determine the behaviour of albumen of urine or of serous effusions when introduced into the circulation of healthy animals; that is, to find out whether this albumen, either by virtue of its diffusibility or of its inassimilability, is again expelled from the body, or whether it is assimilated and consumed. To avoid the complication that would arise from injecting such a composite and unstable liquid as urine, the urea was removed by dialysis. The urine was procured from typical cases of Bright's disease, and was not injected until urea and bacteria were shown to be absent. The experiments were made upon dogs and rabbits. Some blood was allowed to flow before injecting the albuminous liquor, so that a transient plethora with a rise of blood-pressure might not be produced. The results in all the experiments (about twenty) were identical. The albumen never reappeared in the urine; it became assimilated and was consumed. The same results were obtained with highly albuminous serous fluid taken from the peritoneal cavity of an albuminuric patient. The injections were made either into the veins or into the peritoneal cavity. That assimilation took place, was shown by the fact that a dog gained weight consecutively to repeated transfusions of these albuminous liquids into the peritoneal cavity, without the occurrence of albuminuria at any time.

As a supplement to these experiments, the author wished to see whether discharged albumen introduced into the circulation is eliminated by the bile. To this end, he injected dialysed albuminous urine, or the serous fluid of albuminurics, into a large branch of the portal vein. He was never able, however, to detect albumen in the bile.

William R. Huggard, M.D.

3999. *Maragliano on the Respiratory Capacity of the Blood in Cholera Patients.*—Professor Maragliano contributes a preliminary note on his observations on the modifications of the blood-corpuscles in cholera, especially as regards their respiratory capacity. He desired, he says, to determine whether the cyanosis in the consequent asphyxia which occurs in these patients was the consequence of a special toxæmia by which the blood-corpuscles lost the capacity of fixing oxygen, or whether, on the contrary, there was simply asphyxia of the corpuscles due to inherent mechanical conditions, either from diminished fluidity of the blood or simply from alterations of the muscular innervation. His researches prove that the blood of cholera patients in the asphyctic stage retains its proper respiratory capacity; it is even exaggerated, as, indeed, always happens when the blood-corpuscle, from conditions extrinsic to it and mechanical in nature, is unable to fix the oxygen needful for its interchange of gases. This persistent activity of the respiratory capacity of the blood constitutes evidently a fact of much importance, since it proves that the infection determines the asphyctic state mechanically, and not chemically.

4000. *Davide on Cholera.*—The following are the general results of the commission appointed by the Minister of the Interior to report upon the cholera at Spezia. The bacillus, or, more exactly, the vibrio of Koch, was found in all cases; but with this important difference, that in 'fulminating cases,' that is, in the asphyctic form of the disease, the vibriones are found in great quantity in the contents of the small intestine, and nearly always alone; while in cases of longer duration, especially if assuming the so-called typhoid form, few vibriones are found, and these are accompanied by other organisms. The vibriones are well coloured with methyl-violet; they are always curved, and are rather less in size than the bacillus of tuberculosis. They are often joined with their concave surfaces turned opposite ways, so as to form the letter S. They are all killed by a temperature above 60°. Humidity and a temperature between 20° and 35° C. are requisite for their growth. In the asphyctic or fulminating form of the disease the patient dies in a few hours, no lesions being found on *post mortem* save engorgement of some follicles. The contents of the small intestine may be as much as three litres, and swarm with vibriones. The cause of death here cannot be the direct action of the fungus, which is only found in the contents of the intestine, and neither in the tissues nor in the blood. Nor is the loss of liquid from diarrhœa enough to cause death. The symptoms, vomiting, diarrhœa, fall of temperature, and cramps, point to a true poisoning, to an asphyxia, probably due to the toxic properties of the intestinal contents. Drs. Stassano and De Simone injected 18 grammes of the liquid, filtered through plaster of Paris to remove the organism, into the skin of a pig. This gave rise to very slight symptoms, depression, hurried breathing, fall of temperature, and loss of appetite, but in eight hours the animal was all right again. In other animals, dogs, rabbits, &c., no symptoms were caused. In the typhoid form of the disease the lesions of the intestine are more evident; there are desquamation of the epithelium, infiltration of the tissues with the germs, enlargement of follicles and Peyer's glands. Search for the vibriones becomes difficult, it being now outnumbered by many other organisms. A torula is often to be seen a little larger than that of Beer; it has also been met with in the blood. Many injections were made directly into the intestine of dogs and pigs, but with no result. Dr. Stassano, writing to Dr. De Marey, says that the cholera was imported into Spezia by the *Città di Genova*, which vessel was employed to bring back workmen from Marseilles. A woman who washed the linen of the passengers was attacked by cholera and died. This decease was followed by several others, all washerwomen. Two days later, after hard rain, several cases appeared in the city, and, the night following, there were thirty deaths. The epidemic then seemed to abate, but, after three or four days, another storm produced another recrudescence of the disease; forty deaths occurred in one day in a population much diminished by emigration. From that time, with every rain, there was a recrudescence of the disease; but, with each return, the disease became milder and milder. Two almost stagnant streams traverse the city, and both are used for washing. Stassano is of opinion that the water of those streams served to spread the disease. He found the vibrio of Koch in the water, and more abundantly in the mud, and says that it may be without doubt distinguished from the spirilla ordinarily inhabiting stagnant waters.

4001. *Bizzozero on Leukæmic Products.*—It is still a debated point what signification is to be attributed to those leukæmic products which are to be found scattered in great quantity in the various organs of the body, and especially in the liver and kidneys; since by some observers they are regarded as a passive accumulation of leucocytes which have escaped from the vessels, and by others as the production of a continuous multiplication of their component elements. A series of observations which the author has recently instituted on specimens from three leukæmic subjects, seem to throw light on the problem. In both the infiltrated and nodular products which existed in the liver and kidneys, he found without exception that, among the accumulation of leucocytes, there were many which presented the various phases of multiplication by kariokinesis. These elements in a state of scission were shown to be in the tissue itself, and not in the vessels traversing it. The secondary leukæmic products then may be very active foci for the production of white corpuscles; and, by means of these, the parenchyma producing this leucocyte may be indefinitely extended, its invasion only being arrested by the death of a patient. For the demonstration of the kariokinetic figures, the author availed himself of the method which Gram recommends for the demonstration of microphytes; arresting, of course, the decolorising action of the alcohol before decolorisation is complete.

G. D'Arcy Adams, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

4002. Sigel.—Observations on Diphtheria. (*Archiv für Kinderheilk.*, Band vi., Heft 1.)

4003. Infantile Circumcision. (*Lancet*, Sept., p. 441.)

4004. Godlee. — Acute Tetanus from Umbilical Wounds. (*Med. Times and Gazette*, Dec., p. 882.)

4005. Haslewood.—Strangulated Hernia in an Infant Three Weeks Old. (*Lancet*, Dec., p. 1171.)

4006. Godlee.—Simple Fracture of the Skull in Infants, followed by the Development of a Pulsating Tumour. (*Brit. Med. Jour.*, January, p. 75.)

4007. Gibbons.—Acute Purpura Hæmorrhagica in a Child. (*Med. Times and Gaz.*, January, p. 2.)

4008. Forster.—Total Obliteration of the Urethra in a New-born Child. (*Brit. Med. Jour.*, January.)

4009. Edwards.—On a Case of Diabetes Mellitus in a Boy Aged Seven Years. (*Brit. Med. Jour.*, Feb., p. 279.)

4010. Lucas.—Gonorrhœal Rheumatism in an Infant, the Result of Purulent Ophthalmia. (*Brit. Med. Jour.*, Feb., p. 429.)

4011. Kidd.—A Case of a Caseous Gland Impacted in the Trachea and causing Death. (*Brit. Med. Jour.*, Feb., p. 435.)

4012. Comby.—Dilatation of the Stomach in Children. (*Arch. Gén. de Méd.*, 1884, p. 332.)

4013. Kroner.—Ophthalmia Neonatorum. (*Paris Méd.*, Feb. 28.)

4014. Eltzina, Zinaïda, J.—A Case of Noma terminated in Recovery. (*Russkaia Meditz.*, No. 42, pp. 861–63.)

4015. Demme.—Aphasia from Fright in a Child. (*Wiener Med. Blätter*, Dec. 18.)

4016. Demme.—Hæmatemesis after a Burn. (*Wiener Med. Blätter*, Dec. 18.)

Art. 4002. *Sigel on Diphtheria.*—The author furnishes (*Archiv für Kinderheilk.*, Band vi., Heft 1) the brief notes of eighty-seven cases of this disease. Of these, all but four were treated in the Olga Hospital at Stuttgart, and all, without exception, were cases of true idiopathic or scarlatinal diphtheria, diphtheroid angina being excluded as a totally distinct disease. The sexes were nearly equally affected, forty-two being boys. The ages were from 9 months to 18 years, but sixty-four of the patients were aged between 1 and 7 years. The highest temperature recorded was 107°·2. The mortality was 23 per cent. Tracheotomy was performed in nineteen cases, with ten deaths. Forty of the patients were treated with chlorate of potash, salicylic acid, and the like, with in some cases inhalations of and pencillings with corrosive sublimate solution, the mortality being 32·5 per cent. The remaining forty-seven were treated with turpentine internally, and the mortality was 14·8 per cent. The cases treated with turpentine included only three of the ten fatal tracheotomies. The following notes illustrate in a striking manner the value of the drug. Clara S., aged 4 years, was sent into hospital by a colleague to have tracheotomy performed on account of excessive stenosis. Both tonsils and the uvula were thickly covered with a strongly adherent membrane. She was put upon turpentine without operation. The temperature on the evening of admission was 102°·8, the next morning it was 99°·8, and at the same time the stenosis had almost disappeared and the membranes were beginning to loosen. Karl H., aged 2½ years, had the right tonsil covered with membrane, croupy cough, temperature 103°. Turpentine was given, and the next morning the temperature was 99°·3. On the third day it was normal, and the membrane was loosening. Friedreich B., aged 2½ years. Both tonsils were swollen, but no membrane was visible; he had croupy cough, and dyspnœa; temperature 100°. On the second day there were large patches on the uvula and left tonsil; temperature (morning) 104°. Turpentine was given. Temperature at noon 100°·4; in evening 99°·3. Henceforward he was free from fever; the membranes loosened on the third day. The turpentine used in these cases was of the purest kind procurable. It was given in doses of a teaspoonful once or twice a day, mixed either with Malaga wine and yolk of egg, or with crushed sugar and a few drops of brandy. It was sometimes vomited the first time, but nearly always stayed down afterwards. As a rule, one dose sufficed for the cure. Occasionally a second dose was required, and very seldom indeed a third teaspoonful was necessary, these last being chiefly cases where a relapse occurred. The urine presented the characteristic smell of violets, but not a single patient showed the least sign of renal irritation, or indeed any ill-effect whatever. The remainder of the treatment included stimulants from the first, warm baths, and frequent washings out of the mouth, but no gargles or local applications whatever in the later cases. The author sums up with the following conclusions, omitting those already mentioned. 1. The true nature of diphtheria is at present unknown. 2. Diphtheroid angina must be regarded as essentially different from true diphtheria. 3. Those most liable to an attack of diphtheria are the scrofulous and the badly nourished, especially if the tonsils be enlarged. 4. One attack of true diphtheria confers immunity from a second one. 5. Isolation is absolutely necessary.

Ralph W. Leftwich, M.D.

4003. *Infantile Circumcision.* — In the *Lancet*, Sept. 1884, p. 441, the following directions are given for infantile circumcision. Local anæsthesia is not to be recommended. The prepuce is to be drawn in front of the glans, and grasped between the parallel handles of a pair of scissors, and cut off close in front of the scissors; then, when the skin has retracted, the mucous membrane along the dorsum is to be slit up. The two flaps so made are then to be turned off, care being taken to go quite back over the corona glandis. After paring off the mucous flaps a little, they should be stitched to the skin by a continuous catgut suture. A long narrow strip of boracic acid lint is then to be wound firmly round the part, leaving the end of the glans exposed for micturition. Hæmorrhage may be generally stopped by placing the penis in a sponge, and grasping it firmly for a few moments.

4004. *Godlee on Cases of Acute Tetanus from Umbilical Wounds.* — In the *Med. Times and Gazette*, Dec. 1884, p. 882, Mr. Godlee records the case of a child, aged one week, that was brought by its grandmother to the hospital on account of a stiff jaw, attributed to a cold. On examining the child, the jaw was found in a condition of trismus, and the act of examining the child produced a well-marked tetanic fit. A portion of the umbilicus was noticed to be still semi-attached, and there was sanguineous pus oozing from the wound; the child seemed very much neglected, and the friends refused to allow it to remain in the hospital. In a few hours the child was brought again, and the trismus was complete. Death took place eighteen hours after the onset of the symptoms; no necropsy was allowed. Another case occurred in a child, aged three weeks, who was brought to the hospital with the history of being unable to swallow for the last week, owing to the fixity of the jaw, due to 'internal convulsions.' There was a red, irregular, sloughy-looking wound over the umbilicus, which had existed since its birth. A mustard bath was ordered every hour, with 1½ grain of bromide of potassium every second hour. Next morning the temperature was 106°·4 and the child died shortly afterwards of asphyxia. Nothing peculiar could be detected with the naked eye at the *post mortem* examination.

4005. *Haslewood on Strangulated Hernia in an Infant Three Weeks Old.*—In the *Lancet*, December 1884, p. 1171, Dr. Haslewood records the case of a child, 3 weeks old, who suffered from a right inguinal hernia. Taxis was tried under chloroform, but proved useless, and it was decided to operate at once. On cutting down upon the tumour, a very tightly strangulated direct inguinal hernia was brought into view. Reduction was impossible without opening the sac. The constricted portion of bowel was very dark, and formed a loop about four inches in length. By means of great care, and the use of a director, the stricture was divided, and even then there was some difficulty in reduction. The child, however, made a good recovery, and was quite well two months afterwards.

4006. *Godlee on Simple Fracture of the Skull in Infants, followed by the Development of a Pulsating Tumour.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 75, is given an account of two cases of fracture of the skull in infants. One case occurred in the eighth month, and was brought to the hospital the day after a fall of fourteen feet, the side of the head having been struck. There was no unconsciousness or bleeding at the time; but, when seen, there was a large hæmatoma over the right parietal bone, and also complete paralysis on the left side of the body. The swelling gradually became smaller, but began to pulsate on the seventh day, while the paralysis improved. Three weeks afterwards, however, the hæmatoma began to increase, and 7½ ounces of muddy-looking fluid were drawn off, and in a few days the wound was laid open, when a large quantity of fluid was again obtained, together with some genuine pus. Death occurred next morning. At the *post mortem* examination an irregular gap was found in the parietal bone, corresponding to the middle of the hæmatoma. Brain-matter could be seen through the gap, and it was ultimately discovered that there was a direct communication between the hæmatoma and the descending cornu of the lateral ventricle. The second case occurred in a child, 5 months old, who had fallen from a height of eight feet, and soon afterwards a hæmatoma developed on the back of the head. At the end of a week, pulsation was observed in the tumour. The tumour was aspirated twice; but only a little fluid was drawn off, and no improvement resulted. At the end of two months the child was taken home, but died a few days later with symptoms of meningitis. At the *post mortem* examination, it was found that there was a large irregular opening in the parietal bone.

4007. *Gibbons on Acute Purpura Hæmorrhagica in a Child.*—Dr. Gibbons, in the *Med. Times and Gaz.*, Jan. 1885, p. 2, records the case of a boy, aged 3 years, who was under the author's care for eighteen months, suffering from chronic enteritis. During this time the child was put on a carefully regulated diet, modified from time to time during attacks of diarrhœa, which he frequently had. The patient improved in health, and was taken to the seaside in June 1884; but at the beginning of July he suffered from an attack of diarrhœa, from which he did not seem to recover, so that on July 15 the child's mother brought him to London, and Dr. Gibbons was called to see him. On examining the patient, there was found over the sacrum a soft swelling, looking like a bruise, with similar looking bruises on the inner side of each knee-joint, and over the front of each thigh. The temperature was 100° F., and the pulse 100. In spite of treatment the diarrhœa continued, and the motions were extremely fœtid, and quite black, evidently from blood. Epistaxis was frequent, and the motions continued to come away every few minutes; the child became at length quite blanched, and then suddenly vomited about a quart of blood, after which he lay quiet for about an hour and gradually passed away, thirty-six hours after he had been brought to London to see Dr. Gibbons. It was discovered that, six days before the last illness commenced, the ass's milk which the child had been taking contained a thick sediment; this was found to be pus from an abscess in the udder of the donkey. The author comments at length on the case, and inclines to the opinion that the cause of the illness must have been the pus in the milk. The case is interesting in that it opens out the question of the analogy between purpura and scurvy, the diet in this case being composed of nothing but antiscorbutics. There seems to be more similarity between purpura and hæmophilia, according to the views of Dr. Gibbons.

4008. *Forster on a Case of Total Obliteration of the Urethra in a New-born Child.*—In the *Brit. Med. Jour.*, Jan. 1885, Mr. Forster, of Darlington, reports the following case. On Jan. 3, 1880, Mrs. J. was confined of a fully developed boy at full term. A slight venous congestion marked the site of the urethral orifice, on the under side of which there was a shallow groove about one-sixth of an inch in length. The prepuce was retracted, and the examination showed complete occlusion of the urethral orifice. A few hours after birth the child was placed under chloroform, and by means of a probe, director, a stout curved stilette, and a small-sized cathether, a canal was made through the structures of the penis. The break into the bladder was effected by the catheter, the index finger of the operator's left hand being passed into the child's rectum to act as a guide. For two or three days after the operation an oiled bougie was passed, and at the end of ten days the cure was complete.

4009. *Edwards on a Case of Diabetes Mellitus in a Boy Aged Seven Years.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 279, Mr. James Edwards records the case of a boy, aged 7, who was seen in the beginning of January. He had been a fine healthy child up to 6½ years of age, at which time he weighed 60 lbs. His parents said that during the last few months he had seemed soon tired of play, and was always thirsty; he had a good appetite, but was growing thinner, and when seen by Mr. Edwards his weight was 40 lbs. The urine was examined, and was found to have a specific gravity of 1042, and to contain a large quantity of sugar; the quantity passed in twenty-four hours was eight pints. A diabetic diet was ordered and opium was prescribed. A few days afterwards the child became very ill, the temperature was 102° F., the pulse small and frequent, vomiting was constant, and there was a considerable amount of ascites, with acute peritonitis. The symptoms became worse, and the patient died during the night. Cases of diabetes in children, says Mr. Edwards, are extremely rare, and generally, writers on diseases of children do not even allude to it. [A series of cases, from twenty-one months upwards, may be consulted by referring to sect. 332 : 5 of the *Medical Digest*, and to the *Brit. Med. Jour.*, vol. ii., 1882, p. 1042, and the *Lancet*, vol. ii., 1866, p. 3. See also papers on diabetes in children by Drs. Hirchsprung, Budde, and Schouboe in the London Medical Record for 1874, pp. 95 and 114.—*Rep.*]

4010. *Lucas on Gonorrhœal Rheumatism in an Infant, the result of Purulent Ophthalmia.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 429, Mr. Clement Lucas writes that he was not aware that any connection between ophthalmia neonatorum and synovitis has ever been observed, or described. The author, however, cites the following case. A woman brought an infant, 18 days old, which was suffering from purulent ophthalmia of both eyes. The mother stated that a fortnight before delivery she became the subject of a thick purulent discharge from the vagina, and no doubt the child's eyes were inoculated during delivery. On examining it was found that the left knee was swollen, and that there was effusion into the joint; also that the left wrist was swollen, and creaked when moved. Mr. Lucas considered the case one of gonorrhœal rheumatism, consequent upon absorption from the conjunctival surface.

4011. *Kidd on a Case of a Caseous Gland Impacted in the Trachea and causing Death.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 435, Dr. Percy Kidd reports the case of a child, aged 7, who suffered from a croupy cough and somewhat stridulous breathing. One night, after running about in the daytime, and having complained of no urgent symptom, the child suddenly awoke, screaming, coughing, and struggling for breath. He died in ten minutes. At the *post mortem* examination it was found that all the mediastinal glands were enlarged and caseous, and that the lower end of the trachea was blocked by an oval, partially softened caseous gland, which protruded through an ulcerated opening in the anterior wall of the trachea, just above the origin of the left bronchus. [A similar case is reported in the *British Medical Journal*, February 1881, p. 368; *vide Medical Digest*, sect. 634 : 1.—*Rep.*] Richard Neale, M.D.

4012. *Comby on Dilatation of the Stomach in Children.*—According to the author (*Arch. Gén. de Méd.*, 1884, p. 332), dilatation of the stomach is habitually found in rickety children, and results from defective alimentation. The physical signs are meteorismus and 'clapotement' on percussion. The digestive troubles caused by the dilatation are often accompanied by convulsions, sleeplessness, eczema, urticaria, bronchitis, &c. The prognosis is serious, as the dilatation may become permanent. In order to prevent or cure the disease, artificial feeding and premature weaning must be avoided. Large, irregular, or too frequent meals have a very bad influence, and often cause dilatation. In some cases, the stomach-pump may be used.

4013. *Kroner on Ophthalmia Neonatorum.*—In a paper read at the meeting of the German Medical Men's Association the author states (*Paris Méd.*, Feb. 28, 1885, p. 102) that he has found the specific gonococcus in sixty-three out of ninety-two cases of ophthalmia neonatorum. When no gonococci are present, the disease is less dangerous, and does not show any marked tendency to produce serious alterations in the cornea. M. Kroner, therefore, thinks that there are two forms of ophthalmia neonatorum; in the first, or severe form, gonococci are found in the secretions; in the second they are absent. J. S. Keser, M.D.

4014. *Eltzina on a Case of Recovery from Noma under the Use of Magisterium Bismuthi and Resorcin.*—In the *Russkaia Meditz.*, No. 42, 1884, p. 861, Dr. Zinaïda J. Eltzina, of the Elizabethan Hospital for Children, St. Petersburg, describes a rare case of recovery from water-canker. The case was that of a weak rachitic girl, aged 2, who was admitted to the hospital with measles in the eruptive stage and ulcerative stomatitis. On the sixth day after admission, desquamation began. The stomatitis and general weakness progressively grew worse. On the twelfth day a hard swelling of the right cheek and upper lip appeared. Within the next week gangrene both of the oral mucous membrane and integuments developed itself, and dead tissue sloughed away, leaving a hole large enough to admit a finger. On the twenty-fourth day the temperature fell to the normal level, and granulations became visible. By the fifty-eighth day, cicatrisation was complete. After sixty-nine days' stay the patient left the hospital quite well. The local treatment consisted—(1) in powdering the ulcerated surface with magisterium bismuthi, in substance, three or four times daily; (2) in painting the mouth with a 2 per cent. watery solution of resorcin; and (3) in washing out the mouth with a solution of chlorate of potassium. Dr. Eltzina seems to think that the favourable termination of her case is not altogether accidental, but must be at least partly attributed to the use of subnitrate of bismuth. 'It is likely,' she says in conclusion, 'that magisterium bismuthi will prove the best means of dressing in cases of noma; at all events, it decidedly deserves a further trial.' [In the *Vratch. Vedom.*, Nos. 418, 419, and 420, 1880, Dr. Krasin reports two cases of noma in a peasant woman, aged 43, and her daughter, aged 8. Both of them were half-starved, and for six months suffered from malarial fever without undergoing any medical treatment. They came under the author's observation in about two weeks after the appearance of the first signs of water-canker, and were treated by nourishing diet, wine, and quinine, and, locally, by washing out with chlorate of potassium, and dressing with hygroscopic cotton-wool soaked in a watery solution of turpentine oil. In a week or so the destructive process was arrested; but in both of the patients severe diarrhœa intervened, to which in the adult woman a profuse hæmorrhage from the destroyed vessels of the cankerous region added itself. Both of the cases ended fatally from exhaustion—one in two and a half, the other in three weeks, after admission.—*Rep.*]

V. Idelson, M.D.

4015. *Demme on Aphasia from Fright in a Child.*—Dr. Demme, of Bern, communicates to the *Wien. Med. Blätter*, of Dec. 18, the account of a case of aphasia from fright in a child, 6 years old. The case was one of talipes equinus, and the division of the tendo Achillis was undertaken without an anæsthetic. Just before the operation, the child had been very lively and bright, playing with her doll and talking eagerly with her mother and brother. At the moment of the division of the tendon she uttered a piercing cry, after which she completely lost all power of speech. For about ten minutes she wept silently but copiously, and, when she had recovered herself, nothing that could be said would induce her to say a single word. This went on for eight days, during the whole of which time she was bright and lively, and answered readily by signs. On the morning of the ninth day she achieved the single word 'Mamma,' which she then used as an equivalent for everything else, and repeated thirty or forty times as a long sentence, evidently under the impression that she was thereby saying everything that she wished to convey to her hearers. On the fourteenth day her vocabulary was increased by the words, 'Papa, lieb, bös, schlafen, trinken,' which she also made to do duty for all other words; on the eighteenth day she acquired a few more, and she never used one of these words in place of another on her list. She could not talk as well as she did before until the twenty-first day; but, after that, she developed bodily and mentally in a normal manner.

4016. *Demme on Hæmatemesis after a Burn.*—Dr. Demme, of Bern, communicates to the *Wien. Med. Blätter*, of Dec. 18, a case of hæmatemesis after superficial scalding of one arm and hand. The patient was a boy aged 5 years, who pulled a can of hot water over his left fore-arm and hand. Blisters developed, but there was no sign of deeper injury to the skin. About eight hours after the accident, the arm having been dressed with Carron-oil, vomiting of bloody mucus took place, which was repeated several times, in spite of small pieces of ice to suck, and subcutaneous injections of ergotin. Collapse occurred next morning, with renewed hæmatemesis, the temperature falling to 34°·5 C. (94° F.), and the pulse becoming too rapid to be counted, with Cheyne-Stokes respiration. Injections of ether were given at intervals of half an hour, and, after the evacuation of several copious stools containing altered blood, an improvement gradually took place in the symptoms, the scald healed well, and the child was discharged from hospital eleven days later. Alice Ker, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

4017. Féré.—Eclampsia and Epilepsy. (*Archives de Neurologie*, July 1884.)

4018. Möbius.—Tabes in Women. (*Centralbl. für Nervenheilk.*, Oct. 15.)

4019. Seguin.—Illustrations of the Anomalous Course of Posterior Spinal Sclerosis. (*Archives of Medicine*, New York, October.)

4020. Neale.—A Case of Facial Neuralgia treated by Nerve-Vibration. (*Practitioner*, Nov., p. 345.)

4021. Hammond.—Can Locomotor Ataxy be Cured? (*New York Med. Jour.*, Aug. 30.)

4022. Althaus.—Westphal's Symptom in Spinal Disease. (*Lancet*, July, p. 55.)

4023. Althaus.—A New Symptom and a New Theory of Locomotor Ataxy. (*Brit. Med. Jour.*, Oct., p. 708.)

4024. Bramwell.—Epileptiform Tic cured by Nitroglycerine. (*Brit. Med. Jour.*, Sept., p. 609.)

4025. Harkin.—Observations at the Region of the Fourth and Fifth Dorsal Vertebræ. (*Lancet*, July, p. 56; December, p. 995.)

4026. Clarke.—The Treatment of the Morphia Habit. (*Lancet*, Sept., p. 491.)

4027. The Systematic Treatment of Nerve-Prostration.—(*Med. Times and Gazette*, Feb., p. 188.)

4028. Shewen.—A Peculiar Tremor of the Hand and Forearm. (*Australasian Med. Gazette*, Jan.)

4029. Baillarger.—A Dark Coloration of the Convolutions. (*Annales Médico-Psychologiques*, July 1884.)

4030. Torino.—Cigar-makers' Cramp. (*Gaceta de los Hospitales de Valencia; and Revista de Medicina y Cirurgia Practicas*, Oct. 1884.)

4031. Petrone, Luigi M.—Syphilis as a Cause of Tabes Dorsalis. (*Gazz. Med. Ital. Lombard*, Nov. 8, 1884.)

4032. Marsiglia.—Convulsive Gaping. (*Il Morgagni*, July 1884, and *La Med. Contemp.*, Jan. 1885.)

4033. A Case of Swallowing Needles. (*Wiener Med. Blätter*, May 29.)

4034. Hermet, P.—Deafness in Syphilitic Tabes. (*Union Méd.*, No. 86, 1884.)

4035. Perkovsky, S. P.—Division of a Branch of the Auriculo-Temporal Nerve as a Curative Means for Obstinate Neuralgic Maxillary Pain. (*Voenno-Meditz. Jurnal*, Sept. 1883, p. 18.)

4036. Leontieff, A.—A Case of Epilepsy from Tænia Solium. (*Vratch*, 1885, No. 1, p. 10.)

4037. Ciarrocchi.—Tumour of the Centrum Ovale and Island of Reil. (*Gazz. degli Ospitali*, Nos. 101–3, 1884.)

4038. Terrillon.—Deformation of the Limbs in Cervical Pachymeningitis. (*Revue de Thérap.*, No. 2, 1885.)

Art. 4017. *Féré on Eclampsia and Epilepsy.*—Féré (*Archives de Neurologie*, Paris, July 1884) discusses the relations of infantile and puerperal eclampsia with epilepsy, and with the neurotic constitution in general. It is too much the custom at present to think and talk, in presence of a case of eclampsia, at once of uræmia, ammoniæmia, urinæmia, &c., without considering whether the patient is neurotic, and as such exposed to cerebro-spinal disturbance. Yet the different clinical forms which uræmia is known to assume in renal affections might lead us to think that, if patients appear to respond in a different manner to the same pathological alteration of the blood, this must be owing to special organic proclivities. As far as ordinary infantile eclampsia is concerned, the influence of the neurotic constitution is generally admitted; but if we come to the eclampsia of adolescents or adults, more especially after scarlatina and the puerperal state, there is less agreement; and very little attention has as yet been given to the question of the hereditary and individual antecedents of the patients, their ultimate fate, and the fate of their progeny. Féré gives a number of cases showing that the two diseases are analogous—not only clinically, but also as far as their pathogenesis is concerned. In a certain class of cases, it is found that there is hereditary and individual predisposition, and that dentition, infantile affections of the bowels, scarlet fever, pregnancy, and parturition can only be looked upon as exciting causes. More especially puerperal eclampsia, when appearing at a somewhat advanced age, is apt to occur in women who have a hysterical history, and more especially in those who have previously had eclamptic fits at different periods of life, through dentition, gastro-intestinal affections, eruptive fevers, &c.; and this shows an analogy with chorea, which also occurs about the time of parturition in women who have already been subject to it on previous occasions. In another class of cases, further neurotic affections show that the eclampsia was not an accidental occurrence, but depended on a persistent morbid condition. Eclamptic fits come on after scarlatina, pregnancy, &c.; and this acute epilepsy gradually merges into a chronic state, which is characterised by occasional attacks of common epilepsy. Moreover, the neurotic constitution, which may be transmitted to the progeny in various forms, shows the family-links of eclampsia. Some epileptics have never had convulsions at the period of dentition, or pregnancy, or after scarlet fever. Facts of this kind tend to show that in certain persons there exist *epileptogenic zones*, either gastric, uterine, or peripheral, irritation of which is particularly effective for the development of the neurosis. Where the predisposition is not very potent, irritation must be frequently repeated and accumulated in order to provoke a discharge; and thus it happens that eclampsia may only appear during the fourth or fifth pregnancy. Whatever may be the eventual result in the individual case—that is to say, whether the eclampsia be cured or pass into ordinary epilepsy—the prognosis, as far as hereditary transmission is concerned, will always be affected by the links uniting eclampsia with the other members of the neurotic family.

4018. *Möbius on Tabes in Women.*—Möbius (*Centralbl. für Nervenheilkunde*, Oct. 15, 1884) has described thirteen cases of tabes in women, making, with cases previously published, altogether eighteen, in which special attention was directed to any syphilitic taint which might be present. It will be remembered that the opponents of the theory of the syphilitic origin of locomotor ataxy lay stress on the circumstance that, when tabes occurs in women, no specific history or symptoms are found, and that the disease is therefore owing to entirely different causes, such as the influence of cold, damp, &c. Möbius, however, has by careful examination succeeded in eliciting a syphilitic history in all but two of his female cases. This must be, in the nature of things, a point of great difficulty, and one which it is only too easy to overlook in examining a case, unless specially inquired into. If we consider, in addition to this, how eager women generally are to deny that they ever had such a disease, it will be acknowledged that some positive evidence is of more importance than numerous negative statements. Moreover, the immediate consequences of infection are often in women so exceedingly obscure, that they are themselves unaware of being infected; and mild forms of primary and secondary syphilis are known to lead more commonly to tabes in after-life than severe manifestations. Möbius has found that the age of these women was between 21 and 43, the same as in men, where the disease habitually occurs in the prime of life. All had had sexual intercourse; tabes has never been observed in a virgin, nor in women whose character or habits of life rendered infection unlikely. None of the patients had had severe secondary or tertiary symptoms, but a good many had had suspicious discharges, bubos, miscarriages, baldness, ulcerated throat, and cutaneous affections. It is known that women who have had connection with syphilitic men, and given birth to syphilitic children, may never have shown signs of syphilis themselves, and yet have undergone a change in their constitution in so far as they have acquired an immunity against primary infection. Some authors call this syphilisation, and look upon it as a sort of inoculation. Such syphilisation may possibly be sufficient for the causation of tabes. None of the women examined by Möbius had any symptoms of syphilis at the time, except slight engorgement of lymphatic glands and old cicatrices, showing that the affection had been mild. The interval between infection and the beginning of tabes was on the average seven years; the shortest being four, and the longest fifteen years. Several of these patients had given birth to healthy children, either in the interval, or after the outbreak of tabes. As far as exciting causes were concerned, the puerperal state appeared to have been frequently instrumental in accelerating the evolution of tabes; the debility caused by profuse hæmorrhage aggravated the condition in one case. The influence of cold was also mentioned in several cases; depressing emotions and the neurotic constitution appeared to be less effective. In a number of cases, however, no exciting causes whatever could be determined.

4019. *Seguin on the Anomalous Course of Posterior Spinal Sclerosis.*—Dr. E. C. Seguin (*Archives of Medicine*, New York, October 1884) describes six cases in which the symptoms and course of tabes were unusual. In one of them there had been a long-standing lateral curvature of the spine, and syphilis twelve years previous to the first symptoms. Numbness and paresis in the lower extremities preceded the lightning pains, and the case presented rather the features of subacute syphilitic myelitis of the lumbar enlargement. After a time, however, ataxy became developed. The patient improved considerably under specific treatment, followed by nitrate of silver, electricity, and spinal douches. In another case, where there had also been previous syphilis, the first symptoms were severe epigastric and abdominal pain, with a sensation of griping in the seventh or eighth intercostal spaces, followed soon afterwards by pains in both sciatic nerves, ataxy, slight anæsthesia of the legs, and loss of the knee-jerk. Seguin thinks that the initial lesion was seated in that portion of the posterior columns corresponding to the seventh or eighth dorsal vertebræ. The case was also unusual by ataxy supervening in the third week of the malady, and can therefore hardly be considered as one of real tabes. In a third case there was early optic atrophy, leading somewhat speedily to blindness. Again, in another case the pre-ataxic stage lasted twenty-nine years; in another, general paralysis of the insane became developed previous to the ataxy of gait. There was, therefore, probably in this case only slight sclerosis of Burdach's columns, while the cortex of the brain was the seat of advanced and rapidly progressing inflammatory action. JULIUS ALTHAUS, M.D.

4020. *Neale on a Case of Facial Neuralgia treated by Nerve-Vibration.*—In the *Practitioner*, Nov. 1884, p. 345, Dr. W. Neale reports a case of facial neuralgia cured by nerve-vibration. The patient was a policeman, who had suffered on and off for five years from neuralgia of the head and face, induced by wearing a broken helmet on a wet night during the winter of 1878. The rain dropped unceasingly through the aperture on to his head just over the right ear, and for months the patient suffered from almost constant pain starting from the spot on which the rain had dropped. Every winter the neuralgia returned, and no treatment seemed to do good. In January 1884 he was again attacked, and, in spite of every known remedy for neuralgia, he was scarcely twenty-four hours free from pain. This condition of things went on until June 1884, when Dr. W. Neale first saw him, and decided to abandon all drugs and to give percussion a trial. The percuteur was applied to several spots on the face and head, the application lasting about thirty minutes each day. In fourteen days there was little or no pain complained of, and the application was discontinued. Four months afterwards the patient was again seen; he looked well, and said he had never been so long free from pain. No medicine had ever produced an effect anything approaching that produced by the percuteur.

4021. *Hammond on the Cure of Locomotor Ataxia.*—In the *New York Med. Jour.*, Aug. 30, 1884, Dr. Hammond contributes a paper entitled, 'Can Locomotor Ataxia be Cured?' The author concludes by the following statements. 1. The loss of patellar tendon-reflex in locomotor ataxia is not always due to sclerosis of the posterior columns. 2. Sclerosis of the posterior columns may exist unaccompanied by the ordinarily prominent symptoms of ataxia. 3. Congestion of the posterior half of the spinal cord may give rise to most, if not all, of the symptoms of locomotor ataxia. 4. It is impossible during life to make a differential diagnosis between posterior spinal sclerosis and posterior spinal congestion. 5. Posterior spinal congestion is curable. 6. There is no evidence to show that sclerosis once existing in the spinal cord has ever been removed. 7. Those cases of so-called locomotor ataxia which have been cured, are simply cases of spinal congestion more profound in the posterior half of the cord.

4022. *Althaus on Westphal's Symptom in Spinal Disease.*—Dr. Althaus, in the *Lancet*, July 1884, p. 55, contributes an article on the diagnostic value of loss of the knee-jerk in cases of spinal disease. A case is cited of a man, aged 59, who had been treated for supposed gout without success. Dr. Althaus, suspecting tabes, found the knee-jerk absent; on further examination, other well-marked symptoms were found. The author states that there is reason to believe that loss of the knee-jerk is, in some cases, the first, and in the majority of cases one of the first, symptoms of tabes spinalis. The presence or exaggeration of the knee-jerk (although many symptoms of tabes may be present) will show that the case is not one of locomotor ataxy, but that in such cases we have to deal with a combined system—viz., disease of the posterior and lateral columns, or with insular disseminated sclerosis. The exaggeration of the knee-jerk is explained by the sclerotic irritation of the lateral columns, which is too powerful in its effects to be neutralised by the disease of the posterior columns.

4023. *Althaus on a New Symptom and a New Theory of Locomotor Ataxy.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 708, Dr. Julius Althaus states that he has been led to distinguish three different epochs in the development of the ataxic stage of tabes; 1. the initial period, in which ataxy is so slightly marked that a skilled exploration is required to discover the symptom; 2. the truly ataxic stage, in which the peculiar walk known as the ataxic gait is observed; 3. the period of muscular madness, in which even the typical ataxic gait is no longer possible, and muscular action, as far as it still exists, is in utter confusion. A new symptom is then described, one which is noticeable at a very early stage of tabes, viz., great difficulty in walking backwards. It seems as if the heels kept catching in the carpet. This symptom was first noticed in 1882 by the author, and since then he has found it pretty general in tabic patients. He next goes on to discuss the theories propounded by Leyden and by Erb as to the lesion in locomotor ataxy. These theories are altogether different from one another; and, by considering how they differ, the author arrives at the conclusion that in locomotor ataxy the information habitually given to the central ganglia of the brain by the posterior columns is not available for the patient, because these columns have ceased to exist, and the various groups of ganglionic cells can therefore no longer be combined for synergic, orderly, or purposive action. There is no longer any harmony between the muscles which act and their antagonists which regulate the action. Wrong groups of muscles are called into play, which impair their action instead of facilitating it; and there is therefore useless expenditure of nerve-force, causing fatigue. The paper concludes with the following. 'We may, however, take it as an indisputable fact that locomotor ataxy is caused by an interruption of the paths between the posterior roots and the central ganglia of the brain, through sclerosis of the posterior columns, and that static ataxy is, in its turn, brought about by an interruption of the paths between the posterior roots and the cerebellum, through sclerosis either of Goll's columns or of the direct cerebellar strands.'

4024. *Bramwell on a Case of Epileptiform Tic cured by Nitro-glycerine.*—Dr. J. P. Bramwell, in the *Brit. Med. Jour.*, Sept. 1884, p. 609, records the case of a patient, aged 80, who for nine months had suffered from paroxysms of pain, starting from the back of the head and shooting round by the right side of the jaw-bone, over the face and temple on the right side. Sometimes there would be as many as twelve attacks in twenty-four hours, each lasting five or six minutes. Bromide of potassium and croton-chloral were prescribed without much benefit. Solution of nitro-glycerine (1 per cent.) was given in drop-doses three times a day; almost immediate relief was experienced, and in four days all bad symptoms had gone. There was no return of the fits four months afterwards, when the case was reported.

4025. *Harkin on some Observations at the Region of the Fourth and Fifth Dorsal Vertebræ.*—Dr. Harkin, in the *Lancet*, July 1884, p. 56, records some observations on the spinal cord in health and disease in the region of the fourth and fifth dorsal vertebræ. The author has discovered that in every healthy individual of every age, class, and sex, there exists a marked spinal tenderness on pressure over the fourth and fifth dorsal vertebræ. By means of active counter-irritation to this region, the author has treated with success cases of trigeminal neuralgia, facial paralysis (Bell's), acute hysteria, dysmenorrhœa, the reflex vomiting, the neuralgic toothache, and the pruritus pudendi of pregnancy, gastralgia, and other neuroses. In the *Lancet*, Dec. 1884, p. 995, fourteen cases are recorded in which this treatment was applied with marked success. The first noted is that of a clerk, aged 18, who was afflicted with paralytic chorea. After several remedies had been tried in vain the author decided to apply a blister over the fourth and fifth vertebræ, and with the healing of the raw surface every choreic and paralytic symptom disappeared. Two other cases of chorea are also noted; and several cases of facial paralysis were cured by applying a blister to the region of the fourth and fifth dorsal vertebræ. This treatment answered very well in some cases of persistent vomiting during pregnancy. One case is recorded of a woman who suffered during the first five months of pregnancy from excessive pruritus pudendi; one application of the blister immediately produced a complete cure.

4026. *Clarke on the Treatment of the Morphia Habit.*—Mr. J. St. Thomas Clarke, in the *Lancet*, Sept. 1884, p. 491, narrates the case of a lady, aged 29, who was in the habit of injecting herself with morphia subcutaneously three or four times a day, using on an average eight to ten grains daily. On March 25 the patient voluntarily handed over her apparatus and solution to Mr. Clarke, and placed herself entirely under his care. For ten days or more she suffered from vomiting and excessive restlessness, with high temperature. By April 5 she was able to go downstairs to meals, slept fairly well, and gained strength rapidly, making a complete recovery in a few weeks. The author contends that the method of sudden and absolute withdrawal of the drug has greater advantages than the tapering-off plan, both for patient, medical man, and nurse.

4027. *The Systematic Treatment of Nerve-Prostration.*—In the *Med. Times and Gazette*, Feb. 1885, p. 188, the following case is recorded. A middle-aged gentleman, when first seen by the author, was sitting huddled up in an easy-chair in the corner of a small room, which was in utter darkness. His eyes were protected with spectacles and a black silk bandage, so that no light could get to them. The patient stated, in a weak voice, that the slightest gleam of light brought on a 'nerve-storm'; he could not bear any noise, and could scarcely endure anyone to speak to him. For twenty years he had suffered from different forms of hysteria. The author decided to try the combined treatment of massage, feeding, and moral influence. Dr. Playfair was consulted, and recommended the patient to be removed to good lodgings, to be placed under an experienced nurse, and submitted to the ministrations of an efficient rubber. For four weeks the patient consumed, each day, three large meals, four pints of milk, one pint of raw-meat soup, and several intermediate supplies. The only drug given was malt extract. During this time, no progress having been made with regard to the eyes, it was decided to apply stronger moral influence. He was seriously talked to, and the goggles and bandages were, with his consent, removed, the result being an almost sudden return to health. The next evening he went for a walk without any protection to his eyes, and the day following he walked down Piccadilly in broad daylight, spent some time at his club, and never gave a thought to his eyes. At the end of the sixth week of treatment he left England for a voyage round the world, having a day or two before enjoyed an evening at the theatre.

4028. *Shewen on a Case of Peculiar Tremor of Hand and Forearm.*—In the *Australasian Med. Gaz.*, Jan. 1885, Dr. Shewen reports the case of a man, aged 50, who injured his arm whilst shifting some timber. A log weighing about 8 cwt. rolled on to the man's forearm, and two or three minutes elapsed before he was able to free himself. The accident happened in the morning. He rested from work that day, but resumed his occupation the next day without any trouble; and continued his labour for about three weeks. He then noticed that his hand began to shake, and, as he was using a circular saw, he gave up work, fearing lest he should injure himself. Dr. Shewen saw the patient ten months after the accident; the arm did not always tremble, but tremors could be produced at any moment by pressing on the median nerve at any part of its course. RICHARD NEALE, M.D.

4029. *Baillarger on a Dark Coloration of the Convolutions.*—Dr. Baillarger (*Annales Médico-Psychologiques*, Juillet 1884) describes ten cases of general paralysis, where, in addition to the usual appearances in the brain, there was a slaty discoloration of the convolutions. These patients had suffered from sloughing bed-sores over the region of the sacrum. In some cases the putrid sanious matter had penetrated into the spinal cord, and caused spinal meningitis. Dr. Baillarger observes that these bed-sores may be followed by a slaty colour of the brain with purulent meningitis, or by a slaty colour without the meningitis, or a purulent meningitis without the slate colour of the convolutions. He came to the following conclusions. 1. A slaty colour of the convolutions of the brain, when not accompanied by lesions of the bones of the head or purulent otitis, is intimately connected with bed-sores on the sacrum. 2. Sometimes this discoloration is accompanied by purulent meningitis, when it may perhaps be explained by simple imbibition of the purulent matter from the membranes; but it is also observed without purulent meningitis, when it may be attributed to absorption of putrid matter from the bed-sores.

W. W. IRELAND, M.D.

4030. *Torino on Cigar-makers' Cramp.*—Dr. Torino describes a condition of tetanic spasm and pain, occurring in a patient who for nine years had been employed in rolling cigars. In consequence of the spasm attacking the muscles of those fingers only which were used in his occupation, the complaint is likened to scriveners' palsy.' Dr. Torino fully describes the malady, which in its gradual onset and general progress shows a marked resemblance to ordinary writers' cramp, with the difference of the muscles affected. In a well-marked instance, the patient was unable to go through the manipulations of cigar-making more than twice or thrice, without producing pain situated in the left wrist and the back of the left thumb, index, and little fingers, while at the same time the last-named was forcibly extended by a tetanic spasm, and the thumb and index fingers so strongly separated that they could not be brought together. The spasm commenced in the thumb, and then attacked the index, and then the little finger, which last sometimes escaped; the middle and ring fingers were not affected. The cause of the extension was shown to be a spasm of the extensors, and not a paralysis of the flexors; for, when the attack passed off, the latter were quite normal in their action. The right hand was not affected. In analysing the manual movements of cigar-making, Dr. Torino finds that the left hand is used much more than the right, and that the thumb and the index finger are the parts chiefly employed. The little finger, however, has an especial duty to perform in fashioning and pointing the end of the cigar. Dr. Torino calculates that, in making each cigar, the workman's thumb and index finger make three distinct movements; so that, at the rate of manufacture of 300 cigars a day, during nine years of 290 working days in the year, the particular movements concerned in the production of the painful tetanus must have been performed 2,470,500 times. W. Pye.

4031. *Petrone on Syphilis as a Cause of Tabes Dorsalis.*—Professor Erb has pointed out the close relation of tabes to syphilis; in a first series of 100 cases (*Centralbl. für die Med. Wiss.*, 1881), 88 had suffered from syphilis. In a second series of 100 cases (*Berliner Klin. Wochensch.*, No. 32, 1883), 91 had had syphilis; in these 91, 62 had had secondary symptoms, 29 hard chancre without secondaries. The first symptoms of tabes appeared after the syphilitic infection in 13 cases in 1 to 5 years; in 31 cases, in 6 to 10 years; in 25 cases, in 11 to 15 years; in 15 cases, in 16 to 20 years; in 5 cases, in 21 to 25 years; in 1 case, in 26 to 30 years; and in 1 case the time is unknown. Studying the other causes to which the ataxy is attributed, Erb finds in 100 cases: syphilis or simple chancre, 36; syphilis and cold, 17; syphilis and fatigue, 8; syphilis and sexual excesses, 7; syphilis and wounds, 2; syphilis and cold and fatigue, 15; syphilis and cold and excesses, 4; syphilis and fatigue and excesses, 3; syphilis and excesses and wound, 1; cold alone, 3; fatigue, 2; excesses, 1; traumatism, 1. Fourrier finds that 93 per cent. of his ataxic cases have had syphilis, and quotes several of his colleagues who have found syphilis in all cases:—Vogt, 40 per cent.; Rumpt, 66 per cent.; Fischer, 72 per cent. Dr. Petrone in 50 observations has found syphilis in 24 cases, 4 cases doubtful, and 22 cases non-syphilitic. In the 24 cases of tabes with manifest syphilis, 12 were treated with mercury alone, 12 with iodide of potassium. The ataxic symptoms commenced after the syphilitic infection in 11 cases from 1 to 5 years; in 8 cases from 6 to 10 years; in 3 cases from 11 to 15 years; in 2 cases from 16 to 20 years. The causes were:—syphilis alone, 2; syphilis and cold, 10; syphilis and fatigue, 3; syphilis and sexual excesses, 1; syphilis and traumatism, 1; syphilis and cold and fatigue, 6; syphilis and fatigue and excesses, 1. Syphilis is therefore one of the most frequent causes of tabes. The author does not consider that the ataxy in his twenty-four cases was a syphilitic affection properly so-called, because it was in no wise specific. It is impossible to admit the syphilitic origin of tabes from its pathological anatomy. Specific treatment is always unsuccessful. Iodide of potassium always acts in the same way, whether syphilis is present or not. It is probable that syphilis, deteriorating the functions of the organic system, especially the nervous and cardiac vascular systems, hastens the appearance of nervous forms of marked degenerative character, and hence predisposes to tabes. It does not seem proved that syphilis can occasion the development of tabes in the absence of every other cause.

4032. *Marsiglia on Convulsive Gaping.*—A little girl, 4 years old, of lymphatic constitution, subject to intestinal catarrh, was suddenly seized with deep, continuous, incessant gaping. The intestinal catarrh soon yielded to treatment, but the gaping, with which was associated a convulsive movement of the tongue, a certain rotation with tendency to protrusion, did not begin to get better for a month, notwithstanding the administration of bromide of potassium, and did not finally cease until after two months from the beginning of the attack. Only two other cases, one by Coursserant and the other by Bellemand, are recorded, in which gaping figures as a pathological fact *per se*, and not as a transitory and secondary symptom in the course of other affections. Gaping, an expression of respiration with its two constituent periods in the spasmodic or convulsive state, probably remains a reflex act even when, as in the above case, it constitutes a pathological entity. But then the stimulus to the nervous centre must be sought in something different from the physiological stimuli, in defect of oxygen and excess of carbonic acid; and that in view of the law established by Natanson, according to which direct spasms are presented as permanent tonic muscular contractions, while indirect or reflex spasms are always represented by passing clonic muscular contractions. In the author's case, then, the gaping, as a reflex spasm, belonged rather to those due to excess of excitability of the reflex centres of the cerebro-spinal axis, than to those connected with excess of stimulus and increased excitability in the centripetal branches. Indeed, although these latter are more common from the facility by which they arise after any sort of excitement starting from the various parts of the body, yet the morbid conditions of the intestine, from their slight degree and their successive diminution and disappearance, in opposition to the aggravation and long duration of the gaping, would, rather than determine an increased excitability in the centripetal branches, better represent, analogously to what happens in hysteria, an exaggerated reflex excitability of the nervous centre. The nerve-centre interested must be the respiratory, gaping corresponding in its physiological mechanism to respiration, and taking place with the concurrence of the same muscles; the convulsive movement of the tongue also pointing to affection of the nucleus of the hypoglossal nerve. As to the nature of the alteration of this nervous centre, grave anatomical conditions could only be excluded after the cessation of the gaping, which proved the alteration to belong to the so-called functional. The author concludes that gaping may constitute by itself a pathological fact; that in such cases it represents a special neurosis of the bulb, more definitely of the respiratory centre; and that, from the importance of the site affected, the affection is not exempt from danger.

G. D'Arcy Adams, M.D.

4033. *Case of Swallowing Needles.*—The *Wiener Med. Blätter* of May 29 contains the account of a case which occurred in the hospital at Upsala. A young woman, who had previously been quite healthy, with the exception of a rheumatic attack which had left some cardiac weakness behind it, had suffered since the spring of 1882 from symptoms of gastro-intestinal catarrh, with various other anomalous symptoms, for which she was admitted several times into the hospital. The appearance of boils on the arms led to her transfer to the surgical wards in the summer of 1883, where one of them was opened and a needle extracted. Needles being found in boils on other parts of the body, the patient confessed that in May 1881 she had swallowed, at intervals extending over two weeks, five and a half packets of needles, each containing twenty-five, with the intention of destroying herself. At first she felt no inconvenience, but after a few weeks pains came on in various parts of the body, with constipation and other unpleasant symptoms. So far as she knew, no needles had been passed with the fæces. After repeated operations, some under chloroform, 110 needles in all were removed from the body of the patient. Alice Ker, M.D.

4034. *Hermet on Deafness in Locomotor Ataxy.*—The *Centralbl. für die Med. Wiss.* thus summarises Hermet's results. Several examples of rather sudden deafness were met with in tabetic patients, of syphilitic history. The deafness was usually a preataxic symptom, but in a few cases appeared when the disease was fully developed. Peculiar to this kind of deafness were the suddenness of its onset and development, the auditory conducting apparatus being intact (*i.e.* tympanum, ossicles, and Eustachian tube). Most probably the auditory nerves were affected, analogous to atrophy of the optic nerves. If deafness arise suddenly in a syphilitic patient, other symptoms of tabes should be looked for. This deafness is easily distinguished from hysterical deafness. It may occur in hereditary syphilis, but then chiefly between the ages of 15 and 20. The history is also essentially different.

E. J. Edwardes, M.D.

4035. *Perkovsky on a Case of Epileptiform Neuralgia Cured by Neurotomy.*—In the *Voenno-Meditz. Jurnal*, Sept. 1883, p. 18, Dr. S. P. Perkovsky details the case of a retired soldier, aged 67, with epileptiform neuralgia in the left side of the lower jaw. The disease was of five years' standing. The agonising paroxysms continued to return very often, in spite of all ordinary means. Being cognisant of a similar case reported by Richet, in which the patient was instantaneously cured by the division of a branch of the auriculo-temporal nerve, the author tried the same plan in his case. Pain immediately disappeared and did not return. Like Richet, the author is not prepared to explain why the division of a branch of the auriculo-temporal nerve acts beneficially on neuralgia in the region of the inferior dental nerve. Richet's operation consists in an incision about 10 centimètres long and 5 millimètres deep, made between the condyloid process of the lower jaw and the antitragus.

4036. *Leontieff on a Case of Epilepsy from Tænia Solium.*—In the *Vratch*, No. 1, 1885, p. 10, Dr. A. Leontieff reports the case of a priest's daughter, aged 21, who from her twelfth year suffered from epileptic fits, which came three or four times in a twelvemonth. The patient was very nervous, irritable, and complained of various anomalous sensations about her heart. At the same time, she informed the author that for ten years she discharged ribbon-like worms. The latter, being examined, turned out to be *tænia solium*. The administration of ethereal extract of root of male fern cured the patient both of tænia and of epileptic fits.

V. Idelson, M.D.

4037. *Ciarrocchi on Tumour of the Centrum Ovale and Island of Reil.*—A woman, aged 33, suffering from gastric ulcer, was admitted to the medical clinic at Rome under the care of Prof. Rosconi. After the patient had been about six weeks in hospital, intense headache suddenly supervened. The pain was diffuse, and was accompanied by prostration, intellectual dulness, and retardation of the pulse. It was subject to exacerbations and partial remissions, and was rebellious to treatment. Exophthalmos developed concurrently. These symptoms appeared on Jan. 21, 1884; on the 25th they became much worse. The patient lay almost constantly asleep; the limbs were relaxed; utterance was disconnected and indistinct. Respiration became difficult and stertorous. The upper limbs were convulsed; and on the 26th the patient died. At the necropsy were found a telangeiectic sarcoma occupying the centrum ovale of the left temporal lobe; recent hæmorrhages in and around the tumour; œdematous softening of the surrounding centrum ovale, of the cortex of the temporal lobe, and of the posterior part of the internal capsule. The island of Reil and the external capsule were destroyed. The lateral ventricle was filled with bloody fluid. The inferior surface of the frontal lobe was somewhat crushed by the swollen temporal lobe. The other parts of the brain, the cerebral ganglia, and the fourth ventricle were normal. The absence of symptoms cannot, in the author's opinion, be accounted for by the supplemental action of other portions of the brain, as the tumour was probably one of rapid growth, and was perhaps developed entirely in hospital whilst the patient was under daily observation. The conclusions drawn by the author are: 1, that this is the first case, or one of the first cases, of a tumour developed in the centrum ovale of the temporal lobe; 2, that this lesion did not give rise to any symptom whatever; 3, that the destruction of the island of Reil did not cause aphasia; 4, and that logoplegia was absent, although Meynert's fascia (which passes from the inferior surface of the third frontal convolution to the temporo-sphenoidal lobe between the cortex of the island of Reil and the external capsule) was destroyed. [As the tumour was no larger than a chestnut, and as few microscopical details are given, one does not know the precise amount of the disorganisation of the nerve-tissues.—*Rep.*]

William R. Huggard, M.D.

4038. *Terrillon on Deformation of the Limbs in Cervical Pachymeningitis.*—The author has reported at the Société de Chirurgie de Paris (*Revue de Thérap.*, No. 2, 1885) a case of cervical pachymeningitis in which some remarkable deformations of the limbs had taken place. During two years the legs had remained flexed, but the contracture had diminished lately. The knees were swollen; the muscles on the posterior aspect of the thigh hard and tense, but Terrillon divided the tendons of those muscles, extended the legs fully and fixed them in an apparatus. The patient can now stand, and her legs are straight. J. S. Keser, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

4039. Scarpari, S.—Relation of the Motility of the Iris to the Presence or Absence of the Biliary Acids in the Urine. (*Annali Universali di Med.*, March 1884.)

4040. Secondi.—On Antiseptic Treatment in Operations for Cataract. (*Annal. di Ottalmolog.*, An. xii., Fasc. vi.)

4041. Quaglino.—On Retinitis Pigmentosa. (*Annali di Ottal.*, Fasc. v., 1883.)

4042. Richardson.—The Use of the Faradic Current in the Treatment of Strabismus. (*Asclepiad*, Oct. 1884, p. 358.)

4043. Lorenzo.—Nerve-stretching in Glaucoma. (*Revista de Med. y Cir. Pract.*, Sept. 1884.)

4044. Alvarado.—A Cause of Conjunctival Hæmorrhage. (*Revista de Med. y Cir. Pract.*, Sept. 1884.)

4045. Fernandez.—Foreign Body Retained within the Eye for many Years. (*Revista de Med. y Cir. Pract.*, Sept. 1884.)

4046. Dransart.—Treatment of Detachment of the Retina by Iridectomy. (*Progrès Méd.*, Feb. 21.)

4047. Reich, M. J.—On Hydrochlorate of Cucain in Ophthalmic Practice. (*Proceedings of the Caucasian Medical Society*, 1884, No. 12, p. 267.)

4048. Peünoff, A. J.—Echinococcus of the Orbit. (*Proceedings of the Caucasian Medical Society*, No. 12, 1884, p. 279.)

Art. 4039. *Scarpari on the Relation of the Motility of the Iris to the Presence or Absence of the Biliary Acids in the Urine.*—According to the author, pupillary myosis is in relation with the absence of the biliary acids in the urine. In hæmatogenic jaundice, the reaction of the biliary acids is not found in the urine, while, however, the bile-pigment is present. In hepatogenic jaundice, pigments and biliary acids are both present. The mechanism of icteric pupillary myosis is due to exitement of the oculomotor nerve or to paralysis of the sympathetic nerve, caused by the retention of the biliary acids in the blood. The examination of the urine is sufficient to establish the hæmatogenic or hepatogenic character of the jaundice.

4040. *Secondi on Antiseptic Treatment in Operations for Cataract.*—This is an exposition of the methods used in the ophthalmic clinic of Genoa, especially in the extraction of cataract, which is performed by Secondi by the linear process modified by von Graefe. Of the 60 extractions of cataract done by Secondi in 1883, all were successful; and he attributes this brilliant success, at least in great part, to the inspersion of powdered iodoform into the sac of the conjunctiva after the operation. These inspersions, when made with due care, are well borne and most useful.

4041. *Quaglino on Retinitis Pigmentosa.*—This may be hereditary, congenital, and acquired. Pellagra, epilepsy, rheumatism, and overuse of the eyes by petroleum lamp-light are probably causes, but syphilis is the most certain and frequent. Although retinitis pigmentosa must be considered as refractory to every means of treatment, its course may be delayed by rest and appropriate antisyphilitic treatment, and by treatment to remove the slow inflammatory process which favours the course of the disease. The author was among the first to call attention to primary affections of the liver, especially cirrhosis, as probable causes of retinal pigmentation, and of hemeralopia, which often accompanies it. G. D'Arcy Adams, M.D.

4042. *Richardson on the Use of the Faradic Current for the Treatment of Strabismus.*—Dr. B. W. Richardson, in the *Asclepiad*, Oct. 1884, p. 358, notes the case of a young gentleman who was brought to him suffering from internal strabismus of both eyes. The parents were averse to operation; the author therefore determined to try if the external rectus could be brought into contraction by means of a gentle Faradic current. To carry out this intention, a Stohrer's battery was used. Two poles were made, terminating in two silver probes, insulated to within the eighth of an inch of their terminal points. These points were neatly covered with moist cotton-wool. A very gentle current was used to begin with, and the terminals were placed on the eyeball at the outer canthus of each eye. An assistant then gradually increased the current until the external recti contracted sufficiently to bring the eyes nearly straight. This was done every day for nearly six weeks, at the end of which time the strabismus seemed to have been completely removed. Three months later the strabismus gradually returned, to a slight extent, chiefly on the right side. The galvanism was repeated for ten days with good result. Three months later the author again saw the patient, and found the left eye quite normal, but the right still inclined a little to the inner side when he was fatigued. The question is raised as to how far this case supplies a cure for strabismus without operation, and it is suggested that it would be certainly worth a trial in cases of acquired or induced strabismus. [A series of cases by Wells, Carter, and Buzzard, in which electricity cured strabismus, may be consulted in sect. 1811 : 5 of the *Medical Digest*, where for p. 669 read p. 660.—*Rep.*]
Richard Neale, M.D.

4043. *Lorenzo on Nerve-stretching in Glaucoma.*—A case is reported by Dr. Lorenzo of chronic glaucoma occurring in a rheumatic subject, a Portuguese, on whom the operation of nerve-stretching was performed for the relief of pain. The glaucoma first attacked the left eye, and was attended with great pain. The ocular tension reached to + 4, and there was intra-ocular hæmorrhage. Sclerotomy, and, later on, iridectomy, were performed, and the result was the retention of a power of vision of $\frac{4}{200}$. In the course of the attack on the left side, the right eye became the seat of neuralgic pain, which was almost insupportable. For the relief of this neuralgia, it was determined to stretch what is termed in the text the external nasal nerve, but which was evidently, from the description of the incision, the supratrochlear branch of the superior division of the fifth, and not that branch of the nasal division which is called the external nasal in English anatomical text-books. The nerve was exposed by an incision directly over it, and forcibly pulled upon, with the result that the pain, which is described as 'horrible,' disappeared, and was absent up to the time of the report, a period of two months.

4044. *Alvarado on a Cause of Conjunctival Hæmorrhage.*—It is pointed out by Dr. Emilio Alvarado (*El Correo Medico Castellano*) that among the causes of hæmorrhage from the ocular conjunctiva (an occurrence not in itself at all common) should be reckoned the development of small pedunculated polypoid growths, histologically of the ordinary myxomatous variety. Dr. Alvarado instances a case of this kind, in which there was no obvious cause for the hæmorrhage, nor was there any abnormality discernible until the eyelid was turned up, disclosing one of the growths of the size of a pea, which was adherent to the conjunctiva of the upper lid. The patient was a young woman, aged 19, and the hæmorrhage, which is described as 'sufficiently abundant,' occurred frequently, and especially after exercise, for nine months before she sought advice. The tumour was snipped off, the hæmorrhage was checked by pressure and the application of sulphate of copper, and it did not return. Dr. Alvarado also refers to other similar cases recorded by Dr. de Wecker and Dr. Fabre.

4045. *Fernandez on a Foreign Body retained within the Eye for Many Years.*—Dr. Juan Santo Fernandez records a singular case in which a fragment of steel, 2 cm. by 3 mm., and 1 mm. thick, entered the eyeball of a mechanic, aged 26, through a wound in the sclerotic close by the entrance of the optic nerve, and remained within the cavity of the eye for eleven years without its presence being known. After the accident, perception of light was soon abolished, and until blindness was complete there was incessant and severe pain. This afterwards diminished, but returned at intervals, so that at last the patient wished to have the eye removed.

In consequence of this lapse of eleven years, the circumstances of the original accident had passed from his mind, and he stated nothing which would cause the presence of such a foreign body to be suspected. On examination, the cornea was found to be healthy, and the ocular tension normal. The conjunctiva was injected, but the eye appears to have had a fairly natural appearance. No ophthalmoscopic examination was possible, since there was complete atresia of the pupil. The eye-ball was enucleated in the ordinary fashion in January last; and during the operation, at the moment of the division of the optic nerve, the chip of steel was found to be in the way of its section with the scissors, and was thus discovered. Upon the recovery of the patient from the anæsthetic he was shown the fragment, and he then recognised it as being the one at which he had been working eleven years before, having struck it off a sheet of steel with the intention of fashioning it into a spur-rowel, at the instant his eye received the injury, the cause of which was now for the first time explained. Dr. Fernandez reports the case, first on account of the singular position of the sclerotic wound, of the size of the fragment, and of the singular non-resentment of the eyeball to its presence, inasmuch as neither the cornea nor the ocular tension was notably affected; and secondly, because it appears to him to emphasise the superiority of the operation of enucleation over that of abscission. W. Pye.

4046. *Dransart on the Treatment of Detachment of the Retina by Iridectomy.*—At a recent meeting of the Société Française d'Ophthalmologie (*Progrès Méd.*, Feb. 21, 1885), Dr. Dransart read a paper on detachment of the retina, which he believes to be produced by the same causes as glaucoma and myopia. Acting on this supposition, he has performed iridectomy in twenty-three cases, and seven of the patients recovered completely, while there was improvement in twelve. Other plans of treatment, such as mercurial inunctions, injections of pilocarpine, absolute rest, &c., must be tried in suitable cases. J. S. Keser, M.D.

4047. *Reich on Hydrochlorate of Cucain in Ophthalmic Practice.*—Dr. M. J. Reich, of Tiflis (*Proceedings of the Caucasian Medical Society*, No. 12, 1884), judging from an extensive daily use of cucain in his practice for last three months, found it 'one of the greatest acquisitions for the relief of human suffering.' He employed either a 2 per cent. solution, or introduced the drug in substance on the end of a clean probe, and was enabled to perform painlessly, or nearly painlessly, cauterisation with sulphate of copper, or with strong solution of nitrate of silver, extraction of foreign bodies, discission of cataracts, iridectomy, tattooing (in one or two sittings, instead of six or ten sittings as formerly), excision and scooping of tumours embedded in the eyelids, &c. He saw, also, disappearance, or, at least, great relief, of pain in cases of conjunctivitis, erosions of the conjunctiva and cornea, irido-choroiditis, and even panophthalmitis.

4048. *Pëünoff on Echinoccocus of the Orbit.*—Dr. A. J. Pëünoff, of Vladikavkaz, details (*Proceedings of the Caucasian Medical Society*, No. 12, 1884) a case of an Osetin, aged 42, in whom an orbital tumour began to grow about two years previously. Three months before his admission, he became absolutely blind in the right eye, and suffered much from pain in the eye and head. The tumour was bluish, hard, but elastic, and occupied the whole inner side of the orbit, pushing the eyeball outwards, and fixing it in this situation. There were found opacity of the vitreous body, grey reflex of the ocular fundus, and posterior synechiæ. A sarcomatous growth was diagnosed, and its removal decided upon. The operation, however, brought to light an echinococcus-cyst inclosed in a fibrous capsule. Its removal did not present any difficulty. Pain disappeared, and the patient recovered after the operation. When met several months later, the patient stated that he began to see light with his right eye, the movements of which, at all events, returned. According to Dr. Pëünoff, his is the forty-fourth case of echinococcus of the orbit known in literature. [For two cases reported by Dr. Barabasheff, of Kharkov, *see* the London Medical Record, June 1883, p. 245, and March 1884, p. 133.] V. Idelson, M.D.

REVIEWS.

Article 4049.

De l'Intervention Chirurgicale dans le Traitement et le Diagnostic des Tumeurs de la Vessie. Par le Dr. Alfred Pousson. Paris: G. Masson. 1884.

In this work, which is by a pupil of Professor Guyon, we have a careful summary of what has been done in the treatment of vesical tumours by operation, and a strong advocacy of the hypogastric operation of his master against the perineal operation adopted successfully by Sir Henry Thompson.

The work begins with a history of the different operations, and then gives a classification of the growths into simple and malignant, but no account is taken of possibly intermediate forms. Dr. Pousson finds that of 205 cases reported, 138, or about 68 per cent., were simple, and 67, or about 32 per cent., were malignant. But he also gives a careful summary of the positions occupied by these growths, when it has been indicated. As a result of his anatomical and pathological inquiries, he concludes that in the bladder simple growths are more common than malignant. The seat of election is the base, the trigone, and the posterior wall. All forms have a tendency to be pedunculated. Ganglionic infiltration and general infection are extremely rare.

Inflammatory lesions are slow and exceptional. Complications in the kidneys are equally slow. With regard to the means of diagnosis, he lays stress on the hæmaturia being painless, spontaneous, of long duration, not disappearing by rest, but ceasing suddenly, without obvious cause. He seems to estimate rather too highly the information obtainable by microscopic examination of the débris in the urine. The physical signs are carefully considered under the means adopted for their production, and of these considerable, perhaps undue, importance is attached to digital examination above the pubes, and in the rectum simple or combined. Catheterism is given, but the author protests vigorously against an operation being thought of for diagnostic purposes, and rather shutting his eyes to the fact that a perineal incision allows diagnosis and also removal of a growth by the surgeon's hands.

The objections raised to Sir Henry Thompson's operation are practically twofold; that the finger cannot readily reach the bladder in many cases ; and that, when in that cavity, it is too cramped to be able to explore or remove any growths. And against this Dr. Pousson urges that the hypogastric operation allows free exploration by the finger, and even to some extent by the sight, and that removal of growths is more possible by this outlet. Moreover, the operation is, thanks to modern surgery, a comparatively safe and simple one. In the female, he urges his preference for rapid dilatation of the urethra, and gives an account of reported cases which come to the point.

One of the most interesting parts of the work is a chapter on partial or complete resection of the walls of the bladder, and the author urges on theoretical grounds that this ought to be possible. He quotes the experiments also of Glück and Zell, Fischer and Skamenski, which show that in animals the operation can be performed with safety under certain circumstances. The latter author proves that the removal of a part or the whole of the anterior wall was successful in all the dogs operated on with one exception. On the other hand, all the animals in whom the entire bladder was removed save, of course, the immediate neighbourhood of the ureters, sank rapidly of peritonitis. Rejecting, therefore, all idea of the radical extirpation of a tumour involving the trigone and posterior wall, he agrees with the view of Bazy and Monod, that it would not be irrational to excise the anterior or even the lateral wall of the bladder for the complete removal of the growth.

Some cases are given illustrative of the clinical types of tumours of the bladder, and then follow six hitherto unrecorded cases of operation by Professor Guyon. These are fully and carefully given, and one of them is especially interesting, for hypogastric cystotomy was performed twice, with an interval of three months between the two operations. The second operation was required on account of extension of the growth and fresh hæmorrhages, and was carried through the scars of the first operation ; and at the *post mortem* examination the bladder wall was here healthy, and in three days had recovered itself ; but the patient is said to have died from the effects of the previous hæmorrhages. [Does this show that the hypogastric operation ensures a better means of thorough exploration of the bladder or of removal of a growth than the perineal ? We feel doubtful about these claimed advantages, but we recognise that the operation is not so serious a one as it has been considered, and that a second operation is possible. The removal of a growth by either means would be attended with the same good results as regards the cessation of hæmorrhage, but the perineal wound seems more favourable for drainage.] The work concludes with a carefully prepared table of 35 cases of operation for tumours of the bladder in man and 37 in the female.

W. W. Wagstaffe.

Article 4050.

Memoria sulla Cura dell' Ectropio Infiammatorio. Pel Dottore R. Castorani. Napoli. 1884.

Memoria sulla Estrazione Lineare Inferiore della Cataratta con la Capsula. Pel Dottore R. Castorani. Napoli. 1884.

The professor of ophthalmic surgery in the University of Naples gives in these memoirs an account of his treatment in the affections indicated above.

His method of dealing with inflammatory ectropion is by excision of the hypertrophied conjunctiva, followed by cauterisation of the wound with sulphate of copper. The details of eleven cases are given. The most admirable results were obtained.

The operation for cataract was attended with success in 230 out of 237 cases.

William R. Huggard, M.D.

Article 4051.

L'Igiene Pubblica e Privata e la Didattica alla Esposizione Internazionale d'Igiene in Londra, 1884. Rapporto all' Onorevole Municipio di Roma. Del Dr. Felice Santini. Roma. 1885.

The author of this interesting document was commissioned to visit the Health Exhibition, and to report to the Municipal Council of Rome what he should observe of most interest. He devotes a large portion of his space to the English educational system ; especially as carried out compulsorily under the Board Schools. Dr. Santini regards the system with favour, and apparently would be glad to see a like system introduced into his own country.

Speaking of the condition of sanitary matters in England, the author does not think that other countries can put themselves forward as rivals in regard to hygienic knowledge and appliances. This he considers the true cause of British longevity, and of the development and fineness of the race. Hygiene is carried so far that it is not confined to man and his dwellings, but is extended even to plants and animals.

It is not necessary to follow the author throughout. He contrives to give the pith of the lessons taught by the Exhibition in regard to ventilation, drainage, drinking-water, hospitals for infectious diseases, and ambulance organisation. Plans and diagrams are given in illustration.

Dr. Santini pays many a graceful compliment to this country, as well as to the officials connected with the Exhibition.

William R. Huggard, M.D.

Article 4052.

Memoria Historico-Clinica del Cólera Morbo Asiático de España en 1884. Por José Trigueros y Samoza. Madrid. 1885.

The author of this report on the recent epidemic of cholera in Spain holds several official appointments, and for this reason his statements deserve a word of notice apart from the inherent interest of the subject.

The author traces very briefly the course of the disease before it reached Spain. The observations, however, are for the most part of a general character, and few details are given.

To prevent future epidemics, the author thinks that an international committee should be formed, charged with absolute authority to regulate the maritime relations of places suffering from the epidemic. The best safeguard for Europe would be in watching the Suez Canal, which now, 'through the evil influence of the mercantile egoism of England,' does not impose on navigation the restrictions necessary for the health of European nations. Quarantine is not defended ; it is quietly taken for granted.

The entire number of deaths from cholera in Europe in 1884 is stated to have been 21,219. Of these 592 were in Spain, 9,687 in France, and 10,940 in Italy.

The author animadverts on the sanitary conditions of Toledo and Villajoyosa (Alicante).

William R. Huggard, M.D.

Article 4053.

Help at Hand; or, What shall we do in Accidents or Illness? By the Countess Cowper. London: Wells Gardner, Darton & Co.

The ambulance movement, which has been so remarkable during the last few years, has produced its own literature. The latest addition is a small book entitled 'Help at Hand,' by the Countess Cowper, which professes to be 'compiled from the notes made during two courses of ambulance lectures, supplemented by constant reference to Surgeon-Major Shepherd's well-known and valuable handbook.' We quite appreciate the desire of the authoress to bring first aid instruction within the reach of the people of her own parish; but we think no book can supply the place of the practical instruction which the members of the medical profession have proved themselves so willing to afford.

Brevity and cheapness are not the only requisites in a book of this kind; and we fear there is too great a tendency in the little compilation before us to lead ignorant people to imagine that they can dispense with the services of a medical man. It is true that in several parts of the book (*e.g.* pages 8 and 13), the reader is directed to send or go to the doctor; and in the chapter on poisons, among the broad rules to be observed, we find a N.B.—'Always send for the doctor at once.' But it would, we think, have been better if the authoress had laid down more generally the principle indicated in the rule given in the chapter on fractures, 'that the treatment . . . is only to enable the patient to be moved without further injuries.' Readers are told, in case of arterial bleeding, to press on the arteries; but there is no sufficient indication where these are to be found, for we certainly cannot admit that the small outline of the human frame, with a few dots upon it, which serves as a frontispiece, is enough for the purpose. For instance: '*How to find an Artery.*—Press firmly with fingers where you think it is till the bleeding stops; if you do not find it at once, press deeper. You should feel a pulse beating.' Again: '*How to make a Tourniquet.* Shove in a stick under the knot of the bandage, and turn it round as tightly as you can to tighten the bandage over the pad, and fix it there.' This description entirely overlooks the probability that, besides injury to an artery, there may be at the same time one or more fractured bones that have to be taken into consideration. We read as a direction, 'Move upon a stretcher;' but we fail to find a single word as to the manner in which this should be done. The St. John Ambulance Association, which in its own particular field is without a rival, owes its success chiefly to the fact that in everything connected with the theoretical and practical teaching of its pupils in first aid to the sick and wounded, it will admit no instruction unless it be given by qualified medical men; and, further than this, however capable pupils may be, their first duty in presence of an accident or case of sudden illness is to send for a medical man if one can be obtained; applying, before his arrival, the rules laid down for their guidance. Whilst recognising the kind intention of the authoress in compiling this little book, and noticing her acknowledgment of the assistance she has received in its completion from several members of the medical profession, we think it better that such work should be left to those whose profession is medicine and surgery.

Article 4054.

Aids to the Analysis of Food and Drugs. By H. Aubrey Husband, M.B., C.M., B.Sc., M.R.C.S. Eng., F.R.C.S.Ed., &c. London: Baillière, Tindall, & Cox.

This little book, one of the Student's Aids Series, is essentially written for candidates for degrees in Public Health. It has too much of the aspect of a cram for examinations. Thus, in enumerating possible adulterations of tea—a long list of substitutes which have never been found by any analyst 'within the memory of the oldest inhabitant'—we are told 'most of these adulterations are only found in samples submitted to candidates under examination.' Examiners who mix with the specimens intended as test-objects utterly improbable matters act unfairly to the candidates. The subject is large enough without such unnecessary complications, and authors who write with the thought of meeting such examiners are hardly desirable guides. In a number of instances the little book is written upon mere hearsay and without personal knowledge, and 'it is said' occurs more than once. There are such clerical errors as 'Leibig's Condenser' and 'Fuschine.' We are told that among adulterations of whisky and brandy are methylic and amylic alcohols, though no public analyst ever detected the same. It would be easy to find matter for criticism on almost every page, although it cannot be gainsaid that the bulk of the statements and processes given by the author are quite correct.

Article 4055.

In War Time. By S. W. Mitchell, M.D. Boston, U.S. 1885.

This is a story in one volume, commencing in the year 1863, during the height of the struggle between the North and the South. It deals with no incident of battle, but is based on the results of the strife, as found in the hospital wards and in the family history of those who were personally concerned in it. And, as such personal relations may be affirmed to have existed in almost every American family of position and spirit during that eventful period, the story deals with the best average American character in various moods and circumstances. The interest for us lies chiefly in the picture which is thus presented of the habits, manners, and feeling of the varied personages brought before us, several of whom are necessarily typical of the classes to which they belong: and thus the work has an attraction for the English cousin, to whom the development of his *alter ego* on the other side of the Atlantic is always an object not merely of curiosity, but of sympathetic concern. Hence the present volume forms an agreeable contrast, to our taste, with certain works of fiction recently produced in considerable number, which illustrates to a very small extent

American habit and character, such as those of Howells and his school, but which are somewhat prone to detain the reader with mild philosophical reflections, and to interpolate obscure disquisitions, paradoxical statements and researches, often ingenious and thoughtful, into the motives of each minute action as it occurs. Dr. Mitchell, on the other hand, devotes himself to delineating the incidents of an active and stirring story, and to presenting well-drawn sketches of character for those who take part in it. The medical hero of this tale, who is by no means a hero, although he is one of the chief personages of the drama, is a weak, irresolute creature, designed by the author to be so, and Dr. Wendell plays his part accordingly and consistently throughout. The heroine presents a very favourable type of American girlhood, just becoming woman; and the smart, clever, high-spirited, and high-principled young American matron, in this case a widow, and a favourite in society, is agreeably rendered as Alice Westerley. There is no attempt to present any character without imperfection, and the reader will find, before he has finished the story, that each is thoroughly human by reason of its failings, which are by no means hidden from view. The development of the story becomes exciting when it is completely started, and fully repays the reader for some little lack of interest in some of the opening scenes. We heartily commend the volume to our readers.

Article 4056.

The Parents' Medical Note-book. By A. Dunbar Walker, M.D. London: H. K. Lewis.

This book consists of a number of tables, with spaces for the weight of a child at stated periods, the appearance of the several teeth, the various ailments from which he has suffered, with the date of each, &c. If conscientiously filled up by the parents, the information thus afforded would be of considerable use to a practitioner newly called in to the case, and a large collection of the books would give valuable statistics; but we doubt whether many parents would take the necessary pains, and others might object to having such a painful chronicle. There is no reference to hereditary diseases, but this was difficult, and in the case of syphilis unadvisable. Head-masters of public schools might wisely insist upon their new pupils being provided with such a record; but, otherwise, the circulation of this work is likely to be but limited.

Ralph W. Leftwich, M.D.

Article 4057.

Nursery Hygiene. By Burnett Joll, M.B. London: Kimpton.

This little book will be found very serviceable by all mothers. It contains a great deal of useful information, without professing too much. The fault of most books written upon the management of children is that they go too deeply into technical matters; and though they may be useful in the backwoods, they are apt in cities—where a medical man is always within call—to induce the mother to trust too much to her own knowledge, and thus lose valuable time. This book does not go into treatment, and may therefore be safely placed in anyone's hands. We think, further, that many young practitioners will find in it a means of answering some of the puzzling questions often put to them.

Ralph W. Leftwich, M.D.

Article 4058.

A Lecture on the Rearing of Hand-fed Infants. By Edmund Owen, M.B., F.R.C.S. London: Clowes & Sons. 1884.

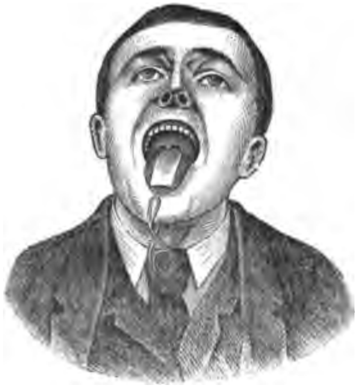
This little book, which is one of the Health Exhibition series, appeals to lay readers, and cannot be expected to be very minute. Still, we are surprised to find no reference to the undoubted value of malted foods. The author is bitterly opposed to condensed milk, and, under the age of six months, to farinaceous foods. There can be doubt that the latter are injurious to the large majority of infants, but we doubt whether the profession does not weaken its authority in making wholesale denunciation of them. Clinically, it may be said to be proved that physiologists are wrong when they assert that no starch-digesting fluid exists in the system of a young infant; for everyone must have seen numberless instances of sturdy infants reared largely upon unmalted farinaceous food from a very early age. The fact is, that great liberties may be taken with the food of a strong child. The author is also very severe upon the modern feeding-bottle, and prefers the old slipper pattern.

NEW INVENTIONS.

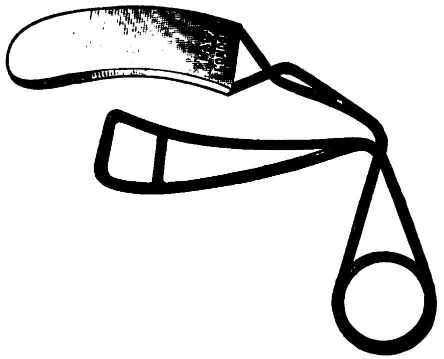
Article 4059.

DR. J. WARD COUSINS' NEW SELF-ADJUSTING TONGUE-DEPRESSOR.

The engravings illustrate the construction and application of this tongue-depressor. The instrument is self-adjusting, and when it is placed in position, the operator can use both hands for any manipulation. It consists of two metallic plates, in combination with a wire recoil-spring; the larger, or tongue-plate, is polished on the upper surface, and this assists in the illumination of the mouth; and on its under side it is roughened, to prevent it from slipping forward on the tongue; the smaller, or submental, plate is curved to fit easily and securely under the chin, behind the maxillary symphysis. The wire spring occupies very little space, and is bent downwards, so as to be out of the way of the surgeon. The blades can be easily opened, and to



assist their expansion a loop of wire is fixed on each side of the spring to support the thumb and finger. The instrument can be employed for depressing the tongue in any position, and therefore it will be found serviceable in minor operations about the mouth, and also in rhinoscopic and laryngoscopic examinations. The submental pressure is especially useful in patients who are intolerant of oral instruments, and this method of fixing the tongue often appears to reduce the reflex irritability of the parts.



The tongue-depressor is very neatly made by Messrs. S. Maw, Son, & Thompson, in three convenient sizes, and can be obtained from that firm at a very moderate price.

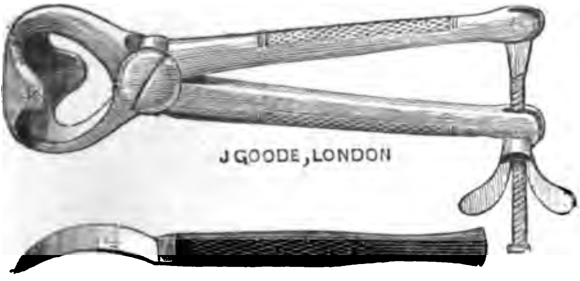
Article 4060.

CLAMP FOR CRUSHING PILES.

A few years ago Mr. Pollock wrote an article in one of the medical papers, giving an account of an operation on piles effected by crushing. The instrument he used was one devised by Mr. Benham.

At the time Dr. Downes, now settled at Eastbourne, was engaged in practice in Kashmir, and had a number of such cases, and therefore determined to give the method a trial. He had an instrument made there according to the description given. The operation answered the purpose, but he experienced one inconvenience, and that was that, if the pedicle were thick, part of it escaped on either side of the clamp, and was, therefore, not crushed. He made a change in the instrument which obviates this defect, and he thinks that in his modification of Mr. Benham's instrument will be found the very best instrument for removing piles that he has yet seen.

The accompanying engraving will explain itself tolerably well.



The difference between Dr. Downes' instrument and the original instrument of Mr. Benham's is that in his the blades are curved instead of being straight, and the pedicle being seized by the central part of the blades of the clamp, there is not the same tendency for part of it to escape when crushing is effected by means of the screw. The knife is merely a curved knife, fitting the inside of the clamp, and is a convenient way to cut off the pile when sufficiently crushed at its base.

Dr. Downes generally gave an anæsthetic, but not always, and has not found his patients complain of very much pain, either during the operation or afterwards. He never had any hæmorrhage to cause the least anxiety, though he has removed very large masses of piles. He generally runs the cautery over the base after cutting away the pile, though Mr. Pollock thought it unnecessary. He thinks it is an additional safeguard against hæmorrhage, and renders the wound less liable to septic influences.

Dr. Downes has operated on some scores of cases, and some of the very worst cases he has ever seen. He has never had cause for anxiety for a moment, nor experienced the least difficulty in operating. He recommends this clamp to the profession as at once simple and effective, and rendering the operation absolutely free from danger of hæmorrhage.

Mr. Goode, of Praed Street, makes the clamp.

NEW PREPARATIONS.

Article 4061.

SQUIRE'S 'CONSTANT' TINCTURES.

Messrs. Squire & Sons have submitted to us for analysis a series of 'constant' tinctures, containing a definite and unvariable percentage of alkaloid. We have examined them carefully, and believe that they possess all the advantages claimed for them. It has been objected to these preparations that in the case of opium it would be very difficult, if not impossible, to standardise the narceine and narcotine. This objection seems to us of little weight, for little or nothing is known about the physiological action of these special alkaloids, and they are never used in medicine. It is, however, of very great importance to physicians to be able to procure a tincture of opium, which always contains the same quantity of morphia. It is probably of very little moment to the druggist how much strychnia his tincture of nux vomica yields, but it is a matter of importance to the physician who prescribes the preparation, and it may be a question of life or death to the patient who takes it. It is to be feared that in past times all tinctures have varied much in quality and in activity ; but there is no reason why they should do so in future, and Messrs. Squire & Sons may be congratulated on the success which has attended their efforts in this direction.

Article 4062.

SAVORY & MOORE'S CONCENTRATED PEPTONISED MILK AND CONCENTRATED PEPTONISED COCOA 'AND MILK.

We have received from Messrs. Savory & Moore samples of their concentrated peptonised milk, and of their concentrated peptonised cocoa and milk. Both are admirable specimens of predigested food, and are thoroughly reliable. By the use of the concentrated milk, a palatable peptonised milk of uniform composition can be prepared in a moment, simply by mixing it with water. It is well adapted for use in the sick room, and for feeding infants and young children. The peptonised cocoa and milk is palatable and digestible, and we find that it is taken without the slightest difficulty. We can thoroughly recommend both preparations.

Article 4063.

BOKÖL.

Bokōl is said to be a Norwegian preparation of malt 'made with pure mountain crystal water,' which, having fallen many hundred feet, becomes naturally aërated. It is alleged regarding it, that it naturally raises the tone of the nervous system, and that it is prescribed by Scandinavian medical men 'on account of its diastasic and nourishing powers.' We have examined it carefully, and find that it possesses little or no power of converting starch into sugar. It is a very good beer, and doubtless will prove of value to invalids and others who cannot take ordinary stout. The agents for the United Kingdom are Messrs. Davis, Bergendahl, & Co., of Newcastle-on-Tyne.

Article 4064.

FERRIS & CO.'S IODOFORM PASTILLES.

Messrs. Ferris & Co., of Bristol, have recently introduced iodoform pastilles, which will be found useful in many affections of the mouth and throat, especially those of syphilitic origin. Each pastille contains two grains; and as they are prepared with a gelatine basis, they may be allowed to dissolve slowly in the mouth. We have no doubt they will come largely into use.

DIETETIC NOVELTIES.

Article 4065.

CLARK'S COFFEE EXTRACT.

This Coffee Extract, which is highly eulogised by Dr. C. A. Cameron, of Dublin, and other authorities, meets with our complete approval. It possesses to a remarkable extent the delicious aroma of the lightly roasted coffee berry, and is perfectly free from that indescribable, but none the less unpalatable taste of boiled coffee which were noticeable in some coffee extracts previously introduced to the public. Diluted with hot water or milk, Clark's Extract gives a beverage with which no fault can be found as to flavour and aromatic qualities. It is remarkably free from acidity, the coffee used in its manufacture being specially selected by the experienced manager of the company, Mr. Whitehead. On that account, we are told, and see no reason for disbelieving the statement, that many persons with whom ordinary coffee does not agree, are quite able, without inconvenience, to drink Clark's coffee.

We have also sent a representative to inspect the factory, at the Queen's Road, Battersea, S.W., and he reports that the processes are conducted with the utmost cleanliness and care, with a full consciousness of the principles involved in producing a beverage at once of the highest quality and possessed of keeping powers.

Clark's Extract is perfectly genuine, and free not only 'from noxious chicory,' but from all other adulteration.

MISCELLANY.

A Remedy for Street Noises.—A correspondent writes to the *Medical Times and Gazette*, January 1885, p. 66, stating that he has found the following plan very useful in procuring relief from street noises. Place some spermaceti ointment in the centre of a little square of thin limp cotton, bring the corners together and tie them with thread, and insert the plug (thus made) into the ear. By gentle kneading and pressure the plug takes the shape of the auditory canal, and will be found most useful in cases of sickness when any noise distracts the patient. For many years in the reporter's practice it has been the custom to plug, when necessary, the patient's ear with cotton-wool soaked in oil—a plan that has prevented in many instances scattering straw on the highway.

Cure of Rheumatism.—*El Siglo Médico* relates the following singular cure from La Paz, Bolivia. A woman had suffered so much from rheumatism, that for six months she had hardly slept. Her right arm was so affected that it was quite useless; she could not work with it or dress herself. While in this state she heard of a countryman who suffered in the same way, and who had been cured by the accidental sting of a bee. As the pain caused by the sting could not be worse than that due to the rheumatism, she determined to try the same remedy. Three bees were obtained and made to sting her on the right arm. The success of the treatment was surprising and complete. On the following night she was able to sleep, and the acute pain had all but completely disappeared. The arm was naturally a good deal swollen, owing to the sting, but the swelling quickly disappeared with cold water dressing. The use of the arm gradually returned, and since there has been no symptom of rheumatism. It is said that the same remedy has been equally successful in several other persons.

Hereditary Predisposition to Tuberculosis.—Prof. Langerhaus (Virchow's *Archiv*, 1884, xcvii. 289-306) discusses at some length the question of hereditary predisposition to phthisis. This, in the light of recent research on the immediate causation of tubercle by infection, *i.e.* the introduction of a specific bacillus, means a susceptibility to infection, such as we see in certain families even in regard to other diseases, of whose origin solely by means of infection no one entertains a doubt, as scarlatina, enteric, &c., and must be assumed to consist in some as yet unrecognised weakness or nutritive abnormality of the cells of the particular tissues which are primarily attacked in each case, these in tubercle being probably the lymphatic cells and vessels. The island of Madeira, and especially the social and other surroundings of those individuals who have gone thither in search of health and with success may be considered as presenting the most favourable climatic and other conditions imaginable, and any amount of phthisis presenting itself in their offspring may therefore fairly be attributed solely to hereditary predisposition. Dr. Langerhaus finds that in the year 1836 there were 57 affected persons, 28 male and 29 female, who were domiciled in the island. In 1864 there were 32 of these persons who had been twenty or more years there, and who had, therefore, practically recovered. Up to 1864 these 32 had had 106 children born in the island, and of these eight had already died of tuberculosis and eight more were in more or less advanced stages of the disease. Of healthy immigrants only one had died of phthisis, and he was a drunkard. Dr. Langerhaus finds, too, that the predisposition is scarcely less marked in the second generation, and he maintains from other observations that, contrary to the generally received opinion, the children born even many years before the manifestation of the actual disease in the parents, are as susceptible to tuberculosis as those born afterwards. He does not, however, attempt to solve the question as to whether phthisis induced in parents of previously healthy families by unfavourable hygienic conditions is equally transmitted to their progeny.

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A new non-irritating aqueous Extract, possessing peculiar astringent and tonic properties, recommended by high medical authorities as a *valuable remedy* in all chronic diseases of the mucous membrane surface, and a specific in the removal of all morbid discharges of whatever nature. Its operation upon inflamed and ulcerated mucous membrane surfaces is really like magic. Sold only through the advice of medical men.

INDICATIONS. — Albuminuria, Diarrhœa, Dysentery, Night-Sweats, Hæmorrhages, Profuse Expectoration, Catarrh, Sore Throat, Leucorrhœa, and other Vaginal Diseases, Piles, Sores, Ulcers, Burns, Scalds, Gonorrhœa, &c.

DIRECTIONS.

For Uterine Inflammation and Ulceration.—Commence with an injection of one tablespoonful to one quart of warm water, twice or three times a day. After one week the strength of the injection may be increased to two tablespoonfuls to one quart of water. Care should be taken to use such a Syringe as will expand the folds of the Mucous Membrane, so that every portion will come in contact with the remedy.

For Leucorrhœa.—Use as directed above.

For Hemorrhoids.—Use as an injection one teaspoonful of the Extract in a tumbler of warm water, twice or three times a day. If the piles protrude, spread a soft cloth with the clear Extract and apply to the parts, and fix with a bandage, or mixed with equal parts of Vaseline.

For a Gargle in Sore Throat.—Use one or two tablespoonfuls in a pint of water.

For Catarrh.—Use a douche of one tablespoonful to one quart of warm water; use also with Nasal Syringe.

For Diarrhœa and Dysentery.—Use dose from half a teaspoonful to a teaspoonful internally, as occasion may require.

For Burns and Scalds.—Spread a soft cloth with the clear Extract; apply to the part affected.

For Cuts and Wounds.—Apply the Extract clear.

Use with care, so as not to allow the Extract to come in contact with the linen, and should it become stained, wash at once with cold water, without soap, so as to avoid a stain.

These directions are only a basis from which Physicians can form an opinion as to the best modes of application. We would suggest, however, that before using the Extract as a Vaginal injection, that the parts should be thoroughly cleansed with warm water, so as to allow the remedy to come in direct contact with the diseased portion of the Mucous Membrane, or the ulcerated portion of the Uterus.

The Extract should be dissolved in boiling water.

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Recommended by Dr. H. Miller, of Glasgow, and other eminent practitioners, as an application in acute affections of the breast, to prevent suppuration and arrest the mammary secretion.
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Tinct. Convallariæ Majalis.
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Price—Fluid Extract, 12*s.* per lb.; 7 lb., 11*s.* 6*d.* per lb. Tincture, 6*s.* per lb.; winch. quart, 5*s.* 6*d.* per lb.

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Progress of the Medical Sciences and of Subjects relating to Public Health

EDITED BY ERNEST HART

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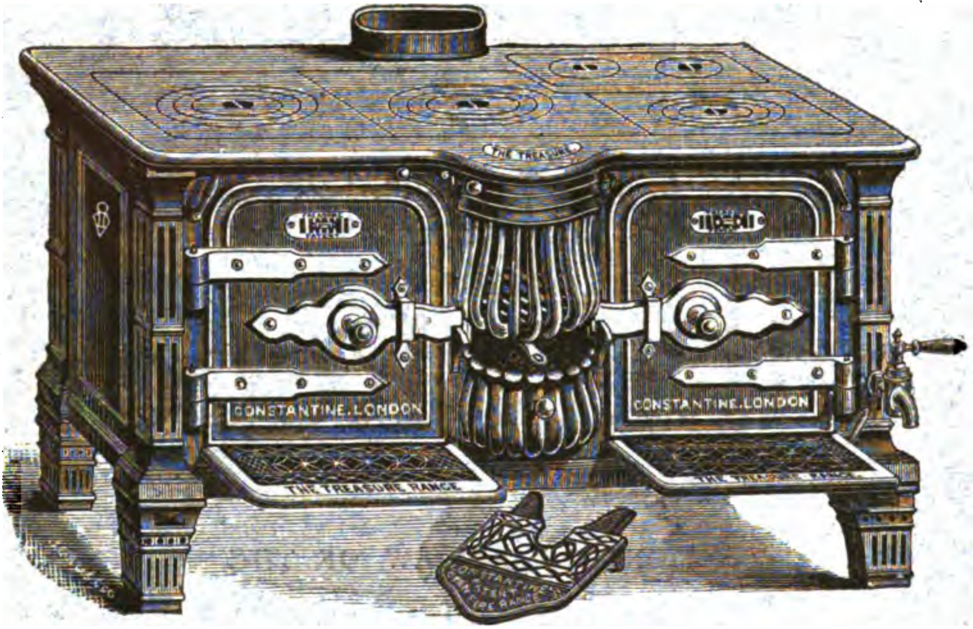

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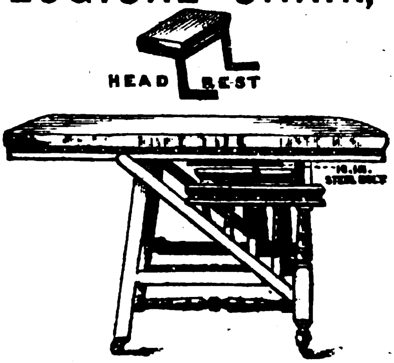

The London
Medical Record.

Article 4066.

SIEFERMANN ON INHALATIONS OF NITROGEN.

Siefermann (*Gaz. Méd. de Strasburg*, and *El Siglo Medico*, Jan. 4, 1885) says that Dr. Treutler, of Blasewitz, recommended the employment of inhalations of rarefied air in phthisis—that is, air from which a certain proportion of oxygen has been abstracted, or to which a certain amount of nitrogen has been added ; the latter proceeding he considers preferable to deoxygenation. He attributes no action to the nitrogen, and holds that it might be replaced by any other inert gas. The good effects undoubtedly obtained in numerous cases of phthisis submitted by him to this treatment only, he explains by the diminution of the oxygen. However, in 1879, Treutler recommended inhalations of nitrogen, attributing to them unconsciously a certain importance. Since then there has been much talk of inhalations of nitrogen, but no special importance was conceded to this gas. Mermagen was the first to recognise that, far from being inert, the nitrogen was really the active agent in this treatment. When patients are made to breathe air to which nitrogen has been added in the proportion of 2 to 7 per cent., certain well-marked symptoms are observed, and these are repeated so constantly as to justify the belief that they are to be referred to the inhalations. With the first inspirations the patients assert that they breathe more easily, the dyspnœa diminishes, and a general sensation of well-being supervenes. The pulse becomes small, often filiform, from contraction of the radial artery. The patients—weak, anæmic, and nervous—experience, during the operation, vertigo, a sensation of weakness and pressure on the head, which may occasionally lead to syncope. The symptoms only are observed in the first two or three sittings, and are more or less marked, according to the quantity of nitrogen employed. A constant symptom, according to Mermagen, is the cessation of the night-sweats, generally after the second or third administration. Kohlschulter and other authors affirm that, instead of a cessation, there is an increase of the sweats ; this, according to Mermagen, is due to these authors employing a too great proportion of nitrogen—96 per cent. ; that is an almost toxic air.

One of the most surprising effects of the treatment is the rapid disappearance (in fifteen days of treatment) of the dulness due to tubercular infiltration of the apex, and the appearance of vesicular murmur with fine moist sounds and tympanic resonance. The temperature, according to Kohlschulter, rises to 40° C., coinciding with the disappearance of the infiltration of the apex, and due therefore to fever of reabsorption. The want of agreement between Kohlschulter and Mermagen in this and other points depends on this, that, while Mermagen only adds from 2 to 7 per 100 of nitrogen to the atmospheric air, Kohlschulter adds at least 11 per cent., and often uses inhalations of pure nitrogen. Krüll shows that, to obtain good effects from the treatment, the proportion of oxygen in the air must not be lessened by more than 7 nor by less than 2 per cent. The effects obtained by Kohlschulter, then, must be attributed to the unusual quantity of nitrogen employed.

All authors agree on the soporific effect of the inhalations of nitrogen. Mermagen says that he has seen the patient fall asleep while taking the inhalation, while other patients, in whom sleep at night was prevented by the cough and dyspnœa, were able, after the employment of the inhalations, to sleep eight consecutive hours. The appetite is sensibly increased, and nutrition keeps pace with it. A good effect is also produced on the colliquative diarrhœa, even in patients in the last stage of the disease. The cough is relieved during the treatment.

The air consists of 79 parts of nitrogen and 21 parts of oxygen ; in respiration only 4½ parts per 100 of oxygen are absorbed, and 16½ are expired without undergoing change. Of the nitrogen no one has taken account, and it is admitted that the 79 parts issue unchanged from the lungs. The absorption of oxygen is 4½ per 100 in normal atmospheres ; but, if the pressure be diminished, the absorption of oxygen and the production of carbonic acid are also diminished. Jourdanet was the first to prove that the solubility of oxygen in the blood is less when the barometric pressure is diminished, and that the symptoms observed in this case, vertigo, palpitations, shortness of breath, are due to the insufficient absorption of oxygen by the blood-corpuscles. Legallois has shown that the inspiration, at the ordinary pressure, of air containing more nitrogen than usual, causes less oxygen to be absorbed, and a diminution of the carbonic acid inhaled. In the same manner, the experiments of Fœnkel prove that the artificial diminution of the oxygen in the air produces the same effects on the absorption of oxygen and the production of carbonic acid, and consequently a diminution in the products of oxidation. All agree on this point, but no one has paid attention to the nitrogen, and moreover the symptoms which are observed when rarefied air is breathed do not agree with those observed in an over-nitrogenised air. At great elevations it is observed that the pulse is full and tense, the respiration anxious and difficult, the appetite abolished or diminished. In over-nitrogenised air, on the contrary, the pulse is small and thread-like, the respiration is easy, without dyspnœa or any symptoms of asphyxia ; the appetite remains or is augmented, as is the general nutrition, since the patients increase in weight. Nitrogen must be absorbed like other gases ; its effects are sedative, calmative, and depressant, as those of oxygen are excitant, irritant, and vivifying. When the air is of its normal composition, these effects counterbalance each other ; but when this equilibrium is disturbed, according to the gas which predominates are the effects produced. How otherwise can be explained the symptoms of vertigo and of muscular weakness observed when air is breathed to which 2 per cent. of nitrogen only has been added ? How can be explained, except by the effect of the nitrogen on the nervous system, the influence on the secretory centres, such as the suppression of night-sweats, which, according to Adamkiewicz, is a pure nervous effect, depending on the central organ ? The inhalations are indicated in the majority of chronic pulmonary affections, especially in early phthisis. In advanced cases miracles must not be expected, but Mermagen has seen much relief obtained even in these. [*See* Valenzuela on inhalations of nitrogen, LONDON MEDICAL RECORD, Dec. 15, 1884—*Rep.*] G. D'ARCY ADAMS, M.D.

ARTICLE 4067.

MUSSO ON FRIEDREICH'S DISEASE.

MUSSO (*Riv. Clin. di Bologna*, No. 10, 1884, and *Annali Univ. di Medicina*, Feb. 1885) narrates several cases of this disease in subjects belonging to a family in which the morbid heredity was displayed in the following manner: grandmother's brother ataxic, grandmother psychopathic; her children were of weak constitution and suffered from various nerve troubles; and finally, in the third generation, the daughter of the son and the sons of the daughter were affected with Friedreich's disease. The diagnosis rested on the insidious mode of onset about the age of puberty, the slow course, the absence or little intensity of sensorial disturbances, the absence of mental disturbances and of paralysis of the sphincters or of trophic lesions, the almost constant existence of bulbar phenomena (vertigo, nystagmus, embarrassment of speech), the existence of ataxy during intentional movement, only ceasing when this ceased.

The differential diagnosis of these cases of hereditary ataxy from tabes dorsalis is founded on the youth of the patient, on the absence of sensorial disturbances, and on the extension of the motor inco-ordination to all four limbs, while in tabes it is, as a rule, limited to the lower limbs. From multiple sclerosis it is distinguished by the absence of rhythmic oscillations in the upper extremities, and by absence of exaggeration of patellar reflex, of rigidity of the limbs, and of spasmodic paraplegia.

In analysing the symptoms presented by his patients, Dr. Musso considers them under three heads. The first includes the lesions of sensation. The patients all had headache, which increased as the disease progressed, and was constant; he therefore does not consider it as secondary and transitory, as Friedreich does, but considers it an important symptom depending on disturbance of the circulation of the superior tract of the spinal cord, from which, as is known, the cervical sympathetic takes its origin. At a more advanced period of the disease neuralgic pains, gastralgia, rachialgia, &c., appeared; and in the last stage partial anæsthesia and analgesia of the extremities, the alterations of sensations being at first congestive in nature and neuralgic in later stages. The second group includes disturbances of vaso-motor innervations, and under this head he notices only premonitory headaches and alterations of menstruation. The third group includes disturbances of motility. At first a vague ill-defined weakness of the lower limbs is observed, soon succeeded by a feeling of fatigue and weight; next the gait becomes uncertain, staggering, zigzag, with dragging of the limbs; then weakness, fatigue, want of precision in movements, appears also in the upper extremities; then the muscles of the tongue become involved.

Under the name of ataxy, many different phenomena are comprehended; the author investigates what factors of motor inco-ordination exist in Friedreich's disease, and, confronting the inco-ordination of tabes with that of hereditary ataxy, he holds that in the first the spasmodic character prevails, in the second weakness and tremor. In tabes, the greatest disturbance occurs in raising or lowering the lower extremities; in Friedreich's disease, the movements of propulsion are most affected; in common tabes the legs are thrown forward, and the gait is skipping or jumping; in hereditary ataxy the legs are propelled laterally, and the gait is consequently zigzag. The inco-ordination of tabes dorsalis depends on want of equilibrium between muscles and antagonistic groups of muscles, while in hereditary ataxy the inco-ordination depends on the discontinuity of intentional movements, from discontinuity of the contraction of the muscles which produce them, and from lateral propulsion from the involuntary contraction of the other muscles not destined to perform the movement. As to the point of origin of the altered innervation maintaining and producing the ataxy, the author records the common opinion that there is an inflammatory or degenerative alteration of the spinal cord, and discusses, while combating, the hypothesis of Hammond, that the point of origin is in the medulla and cerebellum, from whence it gradually extends, but only secondarily, to the medulla. The author holds that the inco-ordination is due to the nerve-current from the cerebellum in its descent to the muscles finding an obstacle in the spinal cord altered by the morbid process.

G. D'ARCY ADAMS, M.D.

ARTICLE 4068.

FERRAN ON EXPERIMENTAL CHOLERA IN MAN.

DR. FERRAN, in the last number of the *Revista de Ciencias Médicas*, of Barcelona, expounds his views of the morphology, and of the pathogenic and prophylactic effects of the Peronospora Ferrani, which he more modestly calls *P. barcinonæ* (*see* LONDON MEDICAL RECORD, March and April 1885).

The paper is accompanied by illustrations of the various stages of development of the Peronospora. Figure 1 represents the comma-bacillus, according to Koch. In Fig. 2 is shown the formation of spores in the axis of the filaments of the thallus; these spores are brilliant, and are observed to be placed at considerable distance apart; the resemblance of a filament or spirillum of comma-bacillus containing spores to that of the bacteridia in sporulation is perfect. When the spores become free, if the medium be not exhausted, they grow to double the size of a red blood-corpuscle; on attaining a certain magnitude they lose their smoothness of contour, and become tuberous; and on arriving at maturity they throw out a long fine filament of protoplasm which, under the eyes of the observer, becomes spiral, and is detached from the ovum or muriform body which has given birth to it. These spirilla behave absolutely in every way like the comma-bacilli from the cholera-dejection. In the thallus also arise those forms which were described under the terms oögonium and oösphere (fig. 3). The protoplasm of these hyaline spheres, whose part in the physiology of the microphyte is unknown, becomes segmented; and in some examples its conversion into granules may be seen, which remain floating in the liquid when the periplasm breaks. The periplasm, on the contrary, is instantly dissolved in the medium on its rupture. From the filamentous thallus or spirillum there may be seen (1) the birth of the sphere, its growth, tuberous change, expulsion of the filament, conversion of this into filamentous thallus capable of recommencing the same cycle; (2) birth of the so-called oögonium, formation of a periplasm, segmentation of the centre, rupture of the sac and its rapid solution in the medium. The destiny of the insoluble portion is unknown.

Such is the actual state of the morphology, in liquid media, and in solid media too; for Ferran has, though rarely, found good examples of oögonia and muriform bodies in the tubes of nutritive gelatine. In the tissues of rabbits, at the site of injection, were seen (1) spirilla, commas, and spores (fig. 4); (2) blood-corpuscles reduced to half their normal diameter, kept in motion by the moving spirilla knocking against them; (3) discs of various diameters (marked in figures 4, 6, and 7), of unknown nature and origin (fig. 6); (4) spherical bodies full of cocci (fig. 7). The difference between the altered blood-corpuscles and the normal is so profound, and their similarity to the small muriform bodies so marked, that it was at first thought that they were the same; the last described spheres were also at first mistaken for oöspheres as developed in cultivations in broth. The microglobulism produced by this living cause is so considerable, that in many cases not a single normal corpuscle could be found. In the blood of a man in whom preventive inoculation of very virulent virus gave rise to general symptoms, the same microglobulism was noted, as well as the presence of innumerable cocci. Only in the man all the corpuscles were not affected, doubtless because the poisoning by the virus did not reach the same degree. Ferran says that the most interesting phenomenon of the morphogeny, the appearance of the spirigenic filament, can be confirmed by all observers sufficiently patient to submit to examination a cultivation containing mature spores. As to the pathogenic action of the microbe, 2 cubic centimètres of the strongest cultivation are sufficient to kill guinea-pigs. Of the same cultivation filtered through an used Chamberland filter, 12 cubic centimètres only caused transient symptoms. The blood of inoculated rabbits, and of the man above referred to, while the symptoms lasted, afforded by cultivation the characteristic microbe. The progressive loss of virulence of the virus necessitated the augmentation of the dose required to produce the same effects. The animals which survive inoculation resist large doses, which would infallibly kill non-inoculated animals. The same virus which gives rise to general symptoms in non-inoculated men, only causes slight local effects in the inoculated.

Ferran asserts that, according as he has learnt the power and effects of the cultivation, he has gradually increased the quantity inoculated, until he has obtained in man the characteristic symptoms of confirmed cholera, algidity, collapse, vomiting, cramps, loose motions not amounting to true diarrhœa, marked febrile reaction, and local inflammatory symptoms. These symptoms disappeared spontaneously in thirty-six hours. Inoculation with gradual attenuations causes no general reaction, and is less dangerous and unpleasant than vaccination for small-pox. He firmly believes that preventive inoculation of attenuated comma-bacillus will form the true prophylactic resource against cholera, and maintains that he has proved that the *peronospora barcinonæ*, or comma-bacillus, is the living agent of cholera, since he has shown that it is capable of causing the disease experimentally in man.

G. D'ARCY ADAMS, M.D.

ARTICLE 4069.

SÉE AND MATHIEU ON DILATATION OF THE STOMACH.

PROFESSOR GERMAIN SÉE and Dr. Mathieu, continuing their remarks upon atonic dilatation of the stomach in the *Rev. de Médicine* for September, refer to the researches of Leube and Bouchard, published since their first paper. The former, they consider regards as nervous dyspepsia many of his cases which they would catalogue as dilatation of the stomach, while they admit the plausibility of the latter's theory that the symptoms of dilatation are largely due to a toxæmia consequent on incomplete digestion and noxious fermentation, though they think he exaggerates the consequences. As to the cause, they do not, with Bouchard, regard simple surcharging of the stomach as an adequate and complete origin, but demand in addition adynamia and atony, general and local. The frequency of dilatation as a result of typhoid fever they claim in support of this view. They also claim a considerable share for moral and psychic causes, as in hysterical, neurotic, and rheumatic subjects.

A. PHYSICAL SIGNS.—1. *Inspection* furnishes little of value, though the epigastrium may be distended or peristaltic movements seen.

2. *Percussion* is practised from a point below the nipple (where pulmonary resonance is certain to be found) downwards till the tympanitic sound of the stomach is reached. By starting from several points there and proceeding downwards, its upper border may easily be mapped out; and by a similar procedure from a point midway between the umbilicus and pubes percussing upwards the lower border is made out, with this additional difficulty, that sometimes the great intestine gives rise to error. To combat this, it is recommended to commence at a symmetrical point below the liver on the right side, and percuss for the sound of the colon. It is then possible to determine, by comparison on the right side, the sonority of the colon and stomach respectively. Should doubt still remain, percussion, by indicating the point of cessation of the gurgle produced in fasting subjects, who have swallowed a small quantity of liquid, will map out the lower line of the stomach. If these results be not decisive enough, Frerichs's method is recommended—viz., the alternate administration to the patient of bicarbonate of soda and tartaric acid. The carbonic acid gas distends the stomach and decisively makes out the limits of its extensibility. The gas is then evacuated, and replaced by water, when dulness takes the place of the tympanitic resonance. Kussmaul has recently proposed as an additional measure the injection into the great intestine of an effervescent mixture, when a comparison between stomachic and intestinal tympanites can be easily obtained.

3. *Succussion and Auscultation.*—Auscultation may be easily applied to the examination of the stomach. If the patient in the supine position, with the abdominal walls relaxed to the utmost, be successed laterally, by taking him between the whole hands at the level of the waist, a liquid splashing is heard comparable to that furnished by Hippocratic succussion. Undoubtedly, this succussion sound may be made out when there exists only a small quantity of gas and a minimum of liquid; but the true cavernous splashing has a pitch and an elevation such as by their variation alone give a clear idea of the capacity of the cavity which produces them.

Further, the metallic or 'cracked pot' sound, as in pneumothorax, may be elicited by similar means to those employed in examination of the chest. As to other methods, the authors are unable to attach any certain indications to the sounds heard on œsophageal auscultation, as recommended by German authors. Methods, also, of auscultating at the moment of contact of effervescing liquids taken separately, and of insufflation with air through the œsophageal tube, are reprobated as not only inefficient, but dangerous to the patient. Leube's suggestion of passing the œsophageal sound and feeling it through the abdomen is also condemned as dangerous.

Faucher's œsophageal tube is recommended as adequate to evacuate, fill, or distend the stomach for diagnostic purposes. The investigations to be reliable must be undertaken under diverse circumstances of time in relation to food and of position, and great reserve is required in deciding affirmatively.

Distension may be predicated when an area of from 12 to 14 centimètres between the upper and lower borders is made out; but dilatation can only be affirmed when that result is shown to be constant after several trials under the varying conditions above mentioned. The variations that occur even during examination point out an important part for spasm and relaxation in the causation, and this idea is strengthened by the dilatation consequent upon the distension of typhoid fever.

B. FUNCTIONAL SYMPTOMS, more or less frequent and characteristic.

1. *Flatulence* occurs immediately after food, embarrasses respiration, and causes distension.

2. *Pains and tenderness.*—Spontaneous pains, radiating from the epigastrium, occur in paroxysms; they are not so acute as those of ulcer, and are not usually accompanied by vomiting as in hepatic colic and locomotor ataxy. They are often associated with special articles of diet, especially ices, wine, and beer. Tenderness in the epigastric fossa and over the epigastric area, particularly along the borders of the right false ribs.

3. *Vomiting* seldom occurs save in very severe cases. Then it is mainly a regurgitation containing, however, mucus and half-digested matter, and generally indicating a temporary aggravation. Sometimes an excess of liquid is rejected, and in these cases cramps, convulsions, &c., at times occur.

4. *Constipation* alternates with diarrhœa. Constipation is the result of intestinal, as dilatation is that of gastric, atony. Diarrhœa is probably the result of transitory intestinal reflex spasms from irritating scybala. Constipation, however, by preventing the normal exit of gases, may act as a cause of dilatation of the stomach.

5. *Dyspepsia* sometimes precedes, sometimes follows, dilatation; but is in some cases absent altogether.

6. *Reaction upon the Organism.*—Cramps and convulsions mentioned above are attributed by Kussmaul to dehydration of the blood, and anæmia of the central nervous system; by others, to reflex irritation; while Bouchard considers the absorption of toxic products analogous to ptomaines as largely answerable. This view is supported by the fact that headache, malaise, inaptitude for mental effort, vertigo, dazzling of the eyes, &c., often disappear promptly on the emptying of the stomach. The articular pains, nervous irritability, eczematous eruptions, &c., are, however, attributable to an antecedent morbific tendency.

C. VARIETIES.—The authors admit four: viz., simple, painful, with gastric embarrassment, and dyspeptic.

1. *The Simple Form* is often latent, and, though easily discoverable when looked for, often escapes notice.

2. *The Painful Form* is the most frequent. This form has been practically described above, and it only remains to add that the pain and tenderness are confined to the front, and do not extend to the back as in round ulcer of the stomach.

3. *Gastric Embarrassment* is indicated by anorexia, furred tongue, bitterness, regurgitation, and even vomiting. Acidulated drinks are the only things well taken. This condition, with or without fever, is a symptom of many morbid states, notably influenza. It is also likely to number gastric dilatation among its causes.

4. *Dyspepsia* with these authors appears confined to a true or chemical dyspepsia, due to deficiency or abnormality of gastric juice. Its signs are essentially loss of flesh and strength, and, where there is a concomitant hepatic disorder, cachexia.

D. DIAGNOSIS.—It is important not to confound primary adynamic dilatation with that consequent upon organic lesions of the stomach or intestine, as the means employed for clearing out the stomach in the first case would be positively dangerous in the last.

The authors lay stress upon Kussmaul's caution to regard copious vomiting as probably consequent upon cicatricial pyloric obstruction. A neoplasm is indicated by tumour, advanced age, cachexia, black vomit, and melæna. Alcoholic history suggests gastritis, while care should be taken not to overlook lesions of the liver or intestine, remembering, however, that diarrhœa and dysenteriform attacks may supervene upon simple dilatation.

E. COURSE.—Attention has been specially directed in this work not to extreme, but to medium, cases, in which rest, regimen, and medication may undoubtedly arrest the course. Periods of spasm, often painful, and of subsequent relaxation and distension, result in loss of elasticity and muscular tone, and the distension finally becomes permanent, and possibly results in modification of structure, which renders it irremediable.

F. TREATMENT.—This is primarily pathogenic; secondarily, symptomatic.

Pathogenic Treatment.—Combat the general predisposition, the neurotic tendency, and specially the influence of psychic and other causes thereon: troubles, overwork, alcoholism, &c. This treatment is essentially prophylactic, and the chief means at hand are hydrotherapy, climatic influences, and gymnastics.

Symptomatic Treatment.—1. Avoid overcharging the stomach, and let the food be such as is capable of complete digestion; raw meat, minced, pounded in a mortar, and passed through a sieve, eggs, bread in moderation, milk in small quantities and often, are recommended. Green vegetables, which leave behind masses of undigested cellulose, are objectionable. Eat little and often. Should the stomach become overloaded, evacuate its contents; subsequently it may be washed out with a small quantity of tepid liquid. Alcoholic drinks (especially beer), cold drinks, ices, &c., must be avoided. Warm tea in small quantities is recommended. 2. Regulate the bowels, avoiding drastic purgatives and salines. Rhubarb and magnesia, and simple laxatives are indicated. 3. Stimulate the gastric muscles by faradisation or galvanisation. A special instrument has been constructed by Gaiffe for the internal electrification of the stomach. Opium, nux vomica, Calabar bean, and ergot are discarded in favour of ipecacuanha, administered to produce nausea and purging without vomiting. Next day a douche, then a day's rest, and then the treatment is repeated. Decided benefit is said to ensue in fifteen days. 4. To combat the pain, give chloroform water or small doses of laudanum. 5. To combat the dyspepsia, Vichy water is recommended among other means, and absorbent powders (charcoal) in flatulent cases. KENNETH MILLICAN.

ARTICLE 4070.

BERGER ON A VARIETY OF FALSE REDUCTION OF HERNIA.

DR. P. BERGER gives, in two papers which have appeared in the *Revue de Chirurgie*, some illustrative cases and remarks upon this interesting subject.

Commencing with the account of a case of Arnaud's which occurred in 1730, he gives in detail eleven cases which have been published, and one which came under his own notice. Of these twelve, it appears that six were inguinal and six crural herniæ; and in an appendix are added three cases of an allied nature, communicated by Professor Azam, of Bordeaux. Of these, only two (Arnaud's and Berger's) recovered, and Berger's died after ten days, though the reduction was effected.

On anatomical examination, he finds the hernial sac and the proper course of the hernia empty: in the deepest part of the latter is the bend of the strangulated intestine, folded back into the cellular tissue of the iliac fossa in the case of an inguinal hernia; behind the pubes, in the cellular tissue of the pelvis by the side of the bladder, in the case of a crural hernia. It is still pressed upon by the neck of the sac, which may have been divided or not, and it makes its way into the subperitoneal connective tissue, through the opening made by the deep incision of the operation for the relief of the stricture. Sometimes there may be a peculiar anatomical arrangement, such as an exposed testicle, or a fibrous cord like that of the umbilical artery, or adhesions between the intestine and the neck of the sac, which explains the difficulty the surgeon may have had to encounter during the operation, and be a reason why the intestine passes along the course which manipulation and instrumental interference have prepared.

In almost all the necropsies it was found that the cause of strangulation, or at least the obstacle to reduction, had not been removed by operation. Moreover, it is evident that the surgeon often has himself prepared the 'false route' into which he has forced the intestine; and Dr. Berger urges that the injudicious force used in attempting reduction is the principal factor in this complex action, the result of which is the substitution of an internal for an external strangulation.

He discusses the symptoms which accompany or follow this accident. Of course, the ultimate absence of relief to the ordinary symptoms of obstruction makes this obvious; but it is important to notice any features by which the failure can be detected early; and he quotes freely, from the experience of Pelletan and others, that the feeling of fulness and firmness of the intestine ought to indicate a state in which no danger exists of the accident occurring when this condition persists after a supposed division of the cause of strangulation. Besides this, the finger introduced into the course of the hernia does not pass freely into the abdominal cavity. The intestine can be distinguished, and may be found not to be freely movable in the peritoneum, but fixed and presenting itself to the finger always in the same position, and in the same character. The author says truly that, the longer the discovery is postponed, the more difficult and obscure the case and its treatment become.

The practical conclusions arrived at may be summarised thus.

1. The surgeon should bear in mind the possibility of the accident and its usual origin from incomplete division of the stricture, or from division of tissues which are not the real cause of strangulation, and from pressure during taxis having been too long or too forcibly attempted.

2. The persistence of symptoms of strangulation points to a false reduction. The special symptoms and signs have been indicated, but two points are specially worth notice. *a.* When the operation has been done several hours, or even a day or two, without the symptoms of strangulation ceasing, can the surgeon distinguish such a false reduction from those cases of pseudo-strangulation due to paralysis of the gut after intense or long continued pressure? The answer is difficult. False reduction is not followed by even temporary relief of any kind; moreover, the pain is localised, more or less, and the swelling can be made out with careful manipulation. Then, on searching by the finger in the wound, the intestine is found distended and fixed in position, and the seat of strangulation is not relieved. *b.* When we are clearly in the presence of a false reduction, can we be sure that it is due to displacement under the peritoneum rather than to any other cause? The other cause indicated is adhesion of the gut to the sac. This can only be answered by the careful exploration of the wound.

3. When the existence of the false reduction is made certain, it must be put right, and to do this it is necessary to draw down the gut from its false position to learn the nature of the obstacle, and then to reduce the hernia after proper division of the stricture. W. W. WAGSTAFFE.

ARTICLE 4071.

HARNACK AND HOFFMANN ON THE ACTION OF THE ALKALOIDS OF QUEBRACHO BARK.

OF Quebracho-bark, *Quebracho blanco*, the bark of the Aspidosperma quebracho, an apocynaceous tree of Chili, two varieties are introduced into European commerce, one coming from the province of Salta, of a lighter, clearer colour, and the other, which is much darker, from the province of Cordoba. Both are of extremely bitter taste. According to the experiments of Heise and Penzold, the wood is inactive, and contains no alkaloids. It is used for tanning purposes in South America. From the bark six different alkaloids have been obtained, four of which are crystalline—viz. aspidospermine, quebrachine, which presents the most beautiful crystals, quebrachamine, and aspidospermatine; and two amorphous—aspidosamine and hypoquebrachine.

According to the experiments of Professor Harnack and Dr. Hoffmann, of whose elaborate papers the *Fortschritt*, of March 20, gives a short epitome, all these alkaloids produce in frogs respiratory paralysis, probably in consequence of annihilating the excitability of the respiratory innervation. Quebrachine acts in like manner most intensely on the respiratory centres of the mammalia; aspidospermine, however, in a less degree. They paralyse the central nervous system in frogs, gradually arresting the voluntary, and later, also, the reflex motion. Aspidosamine, when given subcutaneously in not too minute doses, brings on vomiting in mammalia, probably by its action on the corresponding nervous centres. The other preparations merely produce violent nausea. All these alkaloids also call forth symptoms of central irritation of the medulla oblongata.

Paralysis of the peripheral terminations of the motor nerves has only been exclusively observed as the effect of aspidosamine and hypoquebrachine, but never of the other alkaloids. All the bases of quebracho produce in frogs direct paralysis of the striped muscles; in mammalia, however, a direct influence on muscular irritability could not be proved. In frogs, the heart also participates in the general paralysis of the striped muscles, which is likely to be preceded by paralysis of its motor ganglia. The arrest of the action of the heart, however, in every instance takes place after complete cessation of the respiration; in mammalia, this effect on the action of the heart is less striking.

Of all these alkaloids, quebrachine is the most powerful in its effects, next to it ranks aspidosamine, whilst aspodospermine is the weakest.

Although the emetic properties of aspidosamine somewhat resemble those of apomorphia, their dissimilarities are of the greatest importance in their therapeutic bearing. A subcutaneous injection of apomorphia is a less energetic emetic, but it acts as a most violent irritant on some portions of the brain, and especially on the respiratory centres.

The greatest therapeutic value of quebracho-bark consists in its property of reducing the irritability of the respiratory centre. It will prove beneficial in cases of dyspnœa not depending on impeded aëration—*i.e.* on insufficient oxydation of the blood in the lungs, and not being a mere compensatory symptom; namely, in dyspnœa, in consequence of disorders of circulation and of diseases of the heart. In other cases, in which the dyspnœa constitutes a purely compensatory manifestation, any attempt at lessening the irritability of the respiratory centres may, under certain circumstances, be fraught with danger, although this remedy may even then occasionally assist in alleviating this distressing symptom. This effect is produced by all the alkaloids of the bark; but quebrachine and aspidosamine deserve the preference, especially the first, the emetic action of a subcutaneous injection of which acts most speedily and energetically.

Hydrochlorate of quebrachine is given both internally and subcutaneously in doses from five-sixths of a grain (five centigrammes) to one grain and a half (one decigramme).

FERD. AD. JUNKER, M.D.

ARTICLE 4072.

ON A NEW KIND OF ADULTERATION OF SULPHATE OF QUININE.

Der Fortschritt, of March 26, reproduces from the *Deutsch-Amerikanische Apotheker-Zeitung* a notice of a lately discovered adulteration of sulphate of quinine.

Quinine, for several reasons, viz., its high price, the great quantities continually in demand, and the difficulty of detecting certain admixtures, has frequently been a tempting subject for fraudulent adulterations. At first, salicine was employed for this purpose, but was soon discarded after its easy detection by the test of concentrated sulphuric acid had become known, which gives a red colour whenever salicin, even in most minute quantity, is present in a salt of quinine. Later, sulphate of quinine was mixed with the much cheaper sulphate of cinchonine, the presence of which betrays itself by its insolubility in ether, which readily dissolves sulphate of quinine. The detection of the other alkaloids of the cinchona bark used for adulteration is equally easy; their presence, however, is of but slight importance, their action being similar to, and their price nearly as high as, that of sulphate of quinine.

Lately, another more important adulteration has been discovered and officially reported upon, in America—that with sugar of milk. Dr. Edson, of the 'Board of Health,' suspecting the fraud, bought samples of sulphate of quinine from several chemists and submitted them to Dr. Waller, the analyst to the board, for examination. In one sample more than 50 per cent. of lactose were detected, in consequence of which the chemist, Paul F. Gebicke, from whom it was bought, was arrested. He pleaded his ignorance of the alleged fraud, having obtained the adulterated drug from another firm.

The detection of this adulteration is of no mean interest, lactose being a substance easily overlooked in the ordinary methods of testing sulphate of quinine. Like this, the sugar of milk, heated on a platinum foil, is first converted into carbon, and finally burnt without leaving a residue; unlike cane-sugar and grape-sugar, when treated with concentrated sulphuric acid, it will not change its colour into brown or black, but will merely very gradually and faintly discolour. Sulphate of quinine likewise does not undergo any change in colour by concentrated sulphuric acid, and its opalisation only shows in weak aqueous solutions. If the presence of lactose be suspected, the salt has to be extracted by means of boiling alcohol, in which the sugar of milk is insoluble. The undissolved residue, after complete extraction, is to be submitted to the ordinary tests for sugar of milk. Most characteristic, besides its faintly sweetish taste and comparatively slight solubility in water, is the reduction of Fehling's solution of copper by boiling it with an aqueous solution of lactose. In order to confirm this test, lactic fermentation may be effected by exposing an aqueous solution of milk-sugar in presence of carbonate of calcium for a longer time to the air of a temperature of 68°-86° F. (20°-30° C.); it will hereby be converted into a solution of lactate of lime. The latter, after filtration, will be brought to crystallisation, and the crystals tested for lactose. This is the simplest, and at the same time most reliable, way of recognising the presence of sugar of milk in sulphate of quinine.

Also, by the aid of a powerful lens or of the microscope, heretogeneous admixtures may be detected if present in such quantities as in the above stated case, but the kind of the adulteration could not be ascertained by it. FERD. AD. JUNKER, M.D.

ARTICLE 4073.

TUMAS ON THE ACTION OF HYDROCHLORATE OF CUCAIN ON THE PSYCHOMOTOR CENTRES.

IN the *Ejenedelnaia Klinitcheskaia Gazeta*, Nos. 6, 7, 8, and 9, 1885, Dr. L. J. Tumas, of St. Petersburg, describes his experiments on dogs, carried out at Professor S. P. Botkin's clinical laboratory, in order to determine the action of cucain on the psychomotor centres. In one series of the experiments cucain was applied locally, that is, directly to the exposed psychomotor centres. In another, the drug was injected into the blood (into the left jugular vein).

1. *Local Application.*—In all the experiments the centre for extension of an anterior paw was exposed, and, after an examination of its natural excitability, painted with two or three drops of a solution of cucain, the strength of which varied from 0·005 to 4 per cent. Within one to four or five minutes the excitability was again examined, the examination being repeated several times at about five minutes' intervals. The result was this. A direct application of cucain to the psychomotor centres invariably produced a more or less considerable fall of their excitability, the inhibition always ensuing without any period of initial rise of excitability. The decrease of the latter lasted for about fifteen minutes; then a gradual increase followed, the normal level being reached in about forty-five minutes (rather later than sooner). A repeated painting gave rise to a secondary fall, which, however, was less abrupt than the primary. To clear the question of any possible influence of water and a salt solution on the excitability of the psychomotor centres, several controlling experiments with distilled water and solutions of chloride of sodium were undertaken. They gave entirely negative results, thus placing beyond any doubt the fact that the phenomena as described above were dependent exclusively upon cucain. In order to compare the local action of cucain with that of other drugs undoubtedly acting on the psychomotor centres, the author made also several parallel experiments with morphia. They showed that the local action of the latter was very considerably weaker and shorter than that of cucain. Another group of the experiments had for its aim to elucidate the influence of painting the cerebral cortex with cucain on the occurrence of epileptic seizures. The result coincided with those of the former series. The painting inhibited the functions of the corresponding psychomotor centres. To bring about an epileptic fit, it was necessary to increase the strength of the faradic current, and when a 4 per cent. solution was used the fits remained absent, even on employing the whole available strength of the current (as given by one element of Gréné). That the inhibition was an effect of a purely local and superficial action of cucain, was proved by the occurrence of epileptic fits when the corresponding centres of the other side, or the white substance under the painted centres, were stimulated.

2. *Intravenous Injection.*—An injection of 0·002 to 0·003 gramme to 1 kilogramme of a dog's weight produced first a small fall of excitability of the psychomotor centres, then (in twenty-five to thirty minutes) as small a rise of it above the normal level. The same phenomena (with a corresponding quantitative difference) were observed after injections of stronger doses. When 5 milligrammes to 1 centigramme to the kilogramme were injected, there occurred attacks of an intense general excitement, with general convulsions, dyspnœa, and reddening and swelling of the exposed brain; the attacks were intermittent. An examination of the psychomotor centres, both during an interval and attack, showed a decrease in the excitability of the centres. Hence the author concluded that the general convulsions depended upon an irritating action of cucain on the medulla oblongata (as it had been proved already by Danini, in his inaugural dissertation, *A Contribution to the Question of the Action of Cucain on the Animal System*, 1872, St. Petersburg, and confirmed by Professor V. K. Anrep, in his important essay, 'Ueber die Physiologische Wirkung des Cucains,' in Pflüger's *Archiv*, vol. ii., 1880).

Dr. Tumas draws attention, also, to a remarkable anæsthetic action of cucain on the dura mater and nerves. In a few minutes after painting the dura mater with a 2 or 4 per cent. solution of cucain, the membrane may be painlessly cut into, stretched in all directions, &c.; the animal experimented upon remains motionless and silent, while, without the use of cucain, division of the dura mater is accompanied with piercing cries and struggling. Anæsthesia lasts about fifteen to thirty minutes, and then disappears. The same results were obtained by the author on painting the femoral and sciatic nerves.

V. IDELSON, M.D.

ARTICLE 4074.

KÜRLOFF ON THE TREATMENT OF OBESITY BY HOT AND RUSSIAN STEAM-BATHS.

IN the *Vratch*, Nos. 40, 41, and 42, 1884, Dr. M. G. Kürloff, of St. Petersburg, ably criticises various plans for the treatment of obesity, and furnishes details of an interesting case which was admitted to Prof. V. A. Manassein's clinic, and treated there with common and Russian hot baths. This method has been employed by Professor Manassein for many years in all cases of obesity, excepting those where hot baths were contra-indicated by great cardiac weakness. His results entirely coincide with those obtained by other advocates of the sudorific treatment of the disease under consideration (Schindler-Barnay, Philbert, Foubert, Vacher, &c.). The beneficial action of the method may be easily explained: 1, by the fact of hot (common and Russian) baths increasing the tissue-metamorphosis in consequence of a temporary rise of the temperature of the body (Strakhoff, Bartels, Velitchkovsky, Stolnikoff, Zasetzky, Kosturin, Godlevsky, Schleich, Frey, and Heiligenthal); 2, by the fact that, under the influence of hot baths, the skin is, so to speak, trained for a gradually increased activity (Orloff), the latter being associated with an increased peripheral afflux of the blood and with subsequent removal of internal congestions: the disappearance of the latter leads, in its turn, to a more lively tissue-metamorphosis; 3, by the fact that increased perspiration is necessarily accompanied with an increased introduction of water into the system, which water, passing through the organism, not only washes out the products of metamorphosis, but also leads to an increase of the latter.

Dr. Kürloff's case is a new instance of good service done by hot baths in obesity. The patient, a merchant, aged 38, in whom obesity had begun to show itself from his twenty-seventh year, on his admission to the clinic, weighed 197,000 grammes (nearly 340 lbs.); the circumference of the chest at the level of the nipple measured 150 centimètres; the circumference of the belly (which hung down heavily as low as the middle of the thighs) measured horizontally across the groins 159 centimètres; the abdominal circumference at the level of the middle of the buttocks was 174 centimètres; under the buttocks, 156·5 centimètres; the length from the ensiform cartilage to the pubes, 89 centimètres; the circumference of the upper part of the thigh, 77; that of the neck round its base, 57, &c. The patient, being nearly suffocated in his own fat, could scarcely walk or even speak, and suffered from intense dyspnœa, cardiac palpitation, drowsiness, general weakness, &c. Properly speaking, there was no dietetic treatment at all (in the sense of following the sytems of Harvey, Banting, Ebstein, Oertel, &c.); and the treatment, worthy of the term, consisted almost solely of regular hot baths, which were administered twice daily, morning and evening, at the temperature of 30° to 32° R. (99°·5 to 104° F.) of twenty to thirty minutes' duration. In addition, every Saturday, the patient took a Russian vapour-bath with the application of a *venik* (a bundle of birch twigs; *see* Godlevsky's paper in the LONDON MEDICAL RECORD, 1884, p. 478). Occasionally a hot dry bath was administered in place of a Russian bath. After every common hot bath the patient lost from 400 to 700 grammes of his weight; after every Russian bath, from 600 to 800 grammes; and after a dry hot bath, from 500 to 1,000 grammes. Rapid and steady improvement ensued. During five and a half months' treatment the patient lost 46,000 grammes (more than 100 lbs.); and by the middle of the sixth month the respective measurements (*see* above) were 126, 128, 147, 131, 65, 71, and 47 centimètres. The capacity of the lungs rose from 2,700 to 3,100 cubic centimètres. The patient, though still rather voluminous, felt very well, cheerful, jolly, fond of movement, and even became alive to sexual desire, which had lain dormant in him for more than two years before the treatment. [The author mentions the following Russian works on the subject. 1. Brykoff, Ivan, on *Obesity*, 1841, St. Petersburg. 2. Mokritzky, *Idem*, in the *Voenno-Meditz. Jürnal*, 1873. 3. Simonoff, *Pneumotherapeutics*, 1876, St. Petersburg (on the treatment of obesity by compressed air). 4. Lewis, 'Annotations to a Russian translation of Schindler-Barnay's Pamphlet on Obesity,' 1884, St. Petersburg.]

V. IDELSON, M.D.

ARTICLE 4075.

PASTERNATZKY ON THE ACTION OF HOT DRY BATHS.

IN the *Vratch*, No. 1, 1885, p. 4, Dr. Fedor J. Pasternatzky, of St. Petersburg, gives interesting results of his observations conducted at Professor J. T. Tchudnovsky's clinic on a patient suffering from enormous obesity. [It was the same subject who underwent the treatment in Professor V. A. Manassein's clinic, as described by Dr. Kürloff.]

Dr. Pasternatzky's observations were undertaken in order to throw some light on the influence produced by hot-air baths on the vital capacity of the lungs, on the strength of inspiration and expiration, and on muscular strength in an obese person. A bath apparatus, invented by Dr. E. Th. Lewis, of St. Petersburg, was used (*see* the LONDON MEDICAL RECORD, 1885, p. 220). The duration of the baths was about half an hour. The temperature was each time gradually increased from 25° or 36° R. to 50° R. (88°·25 or 113° to 144°·5 F.). In all, four hot-air baths were administered. The outcome of the observations was as follows. The temperature of the body remained elevated, even after half an hour's lying in bed after the bath; the rectal rise then was on an average 0·15° C., the axillary 0°·62 C. The frequency of the pulse rose from forty to fifty beats a minute, sometimes reaching as high as 150, by the end of a bath. The number of respirations augmented at the rate of twelve to thirty-one (on an average twenty-one) a minute, the acceleration both of the pulse and respiration being still marked even on examination of the patient half an hour after a bath. The average loss of weight of the body immediately after a bath was equal to 663 grammes. During the subsequent half-hour, when the patient lay in bed wrapped in blankets, there was a further loss of about 200 grammes; therefore the average loss after the whole procedure was about 863 grammes. The average vital capacity of the lungs was augmented each time, on an average at the rate of 300 cubic centigrammes. The inspiration increased at the rate of 6·25 millimètres of mercury, the expiration of 5·0 millimètres. The average increase of muscular strength of the hand was equal to 0·25 kilogrammes, and of the spinal muscles 11·25 kilogrammes.

The action of Russian vapour-baths proved identical in all particulars. Dr. Pasternatzky draws attention also to a gradual dilatation of the pupils, ensuing in all subjects—healthy and otherwise—under the influence of hot, dry, and wet baths. The dilatation stands in close connection with the temperature of the bath, as well as with the cardiac and respiratory action. It becomes easily visible when the temperature of a dry bath reaches 40° R., and that of a wet bath 32° R.; on the other hand, it becomes visible when the frequency of the pulse rises to one hundred beats, and that of the respiration to twenty per minute. By the end of half an hour's air bath, when the temperature reaches 50° R., the pupil measures from four to six millimètres in diameter. The dilated pupil retains its circular outline. According to the author's explanation, the dilatation of the pupils and the increase in frequency of the pulse and respiration are results of the action of a high temperature on the superior parts of the spinal cord, where the cardiac, respiratory, and pupil-dilating centres lie in close proximity to each other.

V. IDELSON, M.D.

CIGAR-MAKERS' CRAMP.—In connection with Dr. Torino's description of this affection (*See* LONDON MEDICAL RECORD for April 15, p. 169), it may be interesting to note that a workman in a Lyons tobacco-manufactory was a short time ago seized with cramp of the thumb, that of the index finger following very quickly. The sole occupation of this man was to roll cigarettes.

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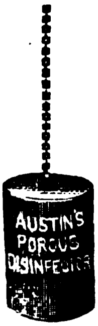

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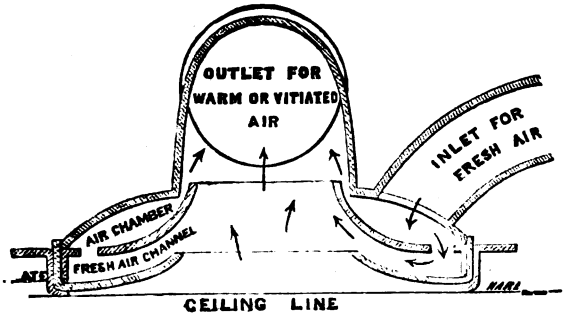
THE GREAT PROBLEM OF THE 19th CENTURY.

VENTILATION WITHOUT DRAUGHT.

The hitherto unsolved problem of 'Ventilation Without Draught' is to be seen practically illustrated at FREDERICK HENRY SMITH'S Test Room, No. 68, 52 Queen Victoria Street, E.C., Patentee of the Automatic Siphonic Aspirator System of Ventilation. A personal inspection invited.



Extract from the Times, *March 14, 1885, page 7.*

VENTILATION WITHOUT DRAUGHT.—This desideratum appears to be accomplished by a syphonic system devised by Mr. Frederick H. Smith, at whose offices, 52 Queen Victoria Street, London, we recently inspected the arrangement. The air supply is conducted into the apartment from the external atmosphere by means of air ducts, which terminate in distributing passages at the floor level. The exit for the vitiated air is placed in the ceiling, and consists of two tubes, a large and a small one, running parallel to each other between the floor joists in the case of rooms having others over them. In the case of rooms on top floors, or those having the roof directly over the ceiling, the tubes are placed concentrically, but the action and results are the same. The larger of the two tubes carries off the vitiated air, while the smaller one forms an induction tube for cold air, its outer extremity being open to the atmosphere. These two Tubes, or conduits, are so connected that the passage of the heated air through the larger tube induces a current of cold air through the smaller one, in a ous stream. The result is a rapid clearing away of all deleterious gases and products of combustion as they accumulate, and the ervation of a pure atmosphere, at an equable temperature, in the apartment. In a small room at Mr. Smith's offices, in which five large ts were burning, the atmosphere was apparently quite innoxious at the level of about 7 ft., the temperature being about 60 deg. Fahr. higher level, however, and especially near to the ceiling, the temperature was high, and the air greatly vitiated. It was demonstrated this vitiated air was being drawn off through the exit tube, which acted as a powerful sucker. After turning off the gas burners, and the temperature of the room generally becoming lowered and equalised, a feeble upward action was still maintained in the upcast tube, ere was no down draught whatever. The system has already been applied to a church and other buildings with acknowledged success.

Extract from the Annual Report of the 'French Hospital and Dispensary,' issued 29th January, 1885.

ave also to return our best thanks to Mr. Smith, who undertook gratuitously to repaint one of our wards and to apply a new system on of his own invention, which was very successful.

Letter from David Urquhart, Assistant Engineer to Colonel Sir Francis Bolton, C.E.

Esq., 52 Queen Victoria Street, E.C. 4 The Sanctuary, S.W., London, November 22nd, 1884.

eply to your inquiry, I have much pleasure in certifying that your system of ventilation as applied to the 'Island Room' of the ed fountains at the Health Exhibition reduced the temperature during the displays from about 110 degs. to about 70 degs., and thus heir duties without inconvenience.—Yours faithfully,

DAVID URQUHART.

SHANKLIN, ISLE OF WIGHT:
A HEALTH RESORT
AND
WINTER RESIDENCE.

Shanklin is situate in a deep Bay on the South-east of the Isle of Wight, and is eminently suitable as a Health Resort for Invalids suffering from effects of hot climates, or from depression and loss of tone consequent on over-strain of mental or physical powers.

The Climate is mild, pure, and salubrious. Owing to the considerable elevation at which Shanklin stands above the sea-level (from 100 to 250 feet) the air is bracing, and there is not that humidity which is experienced in places further West.

The Scenery is beautiful. The Country, though hilly, is quite easy and practicable for walking exercise by invalids.

The Soil of the district is chiefly of the green sand formation; and, owing to its porosity and the undulated surface, the roads and walks are available for pedestrians soon after rain. Shanklin is under the supervision of a Local Board of Health, and is thoroughly sewered. It has a considerable natural fall towards the Sea, into which the Sewage is discharged beyond low-water mark at some distance from the Town. The Sewers are ventilated by the usual Street Ventilators and by Shafts.

The Water Supply is obtained from the neighbouring hills, which rise to a height of nearly 800 feet above sea-level. The Water has been analysed by the Sanitary Authority, and is pronounced to be of excellent quality.

On the East Cliff, the most exposed part of Shanklin, shrubs and plants of tender natures thrive luxuriantly, although left out in the open, and unprotected through the winter months: Myrtles, Fuchsias, Veronicas, Euonymas, Sweetbays, Laurestinas, Lemon Plants, Geraniums, and many others of delicate habit, flourish there and attain great size. This affords proof that the easterly winds are so tempered by their passage over the sea that they are deprived of their virulence. All through the winter months the gardens present abundant evidence of the mildness of the climate at Shanklin, and testify to its fitness as a place for the winter residence of persons of delicate health.

The Report of the Medical Officer of Health (Dr. G. H. R. Dabbs) for the year ending Dec. 31, 1884, states that the rate of mortality was only just over 10 per 1,000; and that there had been an entire absence of any contagious or infectious disease during that period.

Shanklin is well supplied with Hotels and Shops; also with Furnished Houses and Lodgings of good class, mostly detached, and with gardens. There are Six Churches and Chapels, a Literary Institute, and several large rooms available for public meetings and general purposes of recreation also a Subscription Lawn Tennis and Cricket Club. The Shore is covered with beautiful Sand, and is very safe for open Sea Bathing and for Boating; there are Establishments for Hot and Col Sea Water Baths, and a fine level Esplanade, which extends for nearly half a mile.

Any information required as to Hotels, Houses, or Apartments, may be obtained gratuitousl upon application (inclosing stamped and directed envelope) addressed to

ARTHUR F. NEALL, House Agent,
SHANKLIN, I.W

ARTICLE 4076.

WHEELHOUSE ON THE SURGERY OF THE EPIPHYSES.

IN the *Brit. Med. Jour.*, March 1885, p. 475, Mr. Wheelhouse contributes a lecture on cases of injury to the epiphyses of bones.

The author commences by showing how different the skeleton of an adult is from that of a child. Every long bone is developed in separate pieces, the central portion (diaphysis), and two extremities, called the epiphyses. These pieces are kept apart by a line of cartilage until the bone has fully grown; and it is to this part of the history of the growth and development of various bones and joints that the lecturer particularly draws attention. So long as the processes of normal growth proceed in a normal and healthy manner, the character of the bones and joints will be properly maintained; but in certain cases the epiphysis of one bone may grow more in proportion than that of an adjoining bone, and a deformity of the joint will result. Sometimes this deformity will be mistaken for an injury, and the patient will be subjected to surgical interference, which will only make the joint worse, whereas, if left to nature, some amount of compensation may result. Again, from early death, or injury to, or absence of an epiphysis, one or other end of a long bone may fail to grow at all; and so the bone may remain in a rudimentary condition, and may thus present peculiarities of a very puzzling kind; also, by an unequal growth in parts of a bone, the whole may be more or less disfigured or rendered useless. Many cases of hip-joint disease occurring in otherwise healthy subjects have often been put down to strumous origin, whereas the author considers them to be due to some injury in the first instance. The method by which the bones are supplied with nourishment is commented upon, and it is shown how the ends of the bones grow by the epiphyses, whilst the shaft is developed in the main by subperiosteal growth. If this were not so, we should rarely see the recoveries we now look for; in many cases of necrosis the entire bone would come away, instead of only a part.

The lecturer then goes on to consider the relation of the epiphyses to dislocations and fractures: he supposes an injury to have happened to the elbow-joint, and apparently to consist of a simple dislocation backwards of the bones of the forearm; the age of the patient will help very materially in forming a diagnosis. If he be over twenty, there will be little difficulty either in reducing the dislocation, or in retaining the bones *in situ* after reduction; but it may be very different with a patient of more tender age. Here reduction may not be so easy, or, when it has been affected, it may be hard to keep the bones in position; and more careful examination reveals the fact that the lower epiphysis of the humerus has been separated from the shaft, and that the whole joint, consisting of the epiphysis with the bones of the forearm attached to it, has been drawn up behind the stump of the diaphysis.

The treatment in these cases differs considerably; for, when the epiphysis is separated, the joint must be placed in a very firm apparatus, or displacement must recur, leading to a badly united and deformed joint. Mr. Wheelhouse quotes from a lecture by Professor Smith, in which it is pointed out that the idea of the tuberosities of the humerus belonging to the shaft of the bone is incorrect, and also adds that the lower epiphysis of the humerus does not include the condyles, which belong entirely to the shaft of the bone. The epiphysis includes nothing but the trochlea and capitulum. RICHARD NEALE, M.D.

ARTICLE 4077.

JACCOUD ON THE TREATMENT OF BRIGHT'S DISEASE.

IN the *Gazette des Hôpitaux*, is published a lecture recently delivered by Professor Jaccoud on the treatment of Bright's disease.

The lecturer divides cases of Bright's disease into two classes—*a*, urgent, and *b*, those unattended by urgency. One phenomenon which constitutes urgency is dyspnœa (not uræmic), which may be the consequence of ascites, of hydropericardium, or of hydrothorax, or of a bad condition of the blood. Another urgent symptom is repeated vomiting.

The author then speaks of those cases which are devoid of urgency. In these cases, the most absolute rigour must be laid down and maintained with regard to diet, beginning with an exclusively milk regimen. A purely milk-diet is not agreeable, but the patient must take a sufficiency of milk necessary to prevent the sensation of hunger, without overloading the digestive organs. The milk should be given cold, but, if it cannot be tolerated cold, it must be warmed in a water-bath, but not boiled, and it must be taken without the addition of salt or sugar. It should be taken in moderate quantities every hour, and the mean quantity necessary during twenty-four hours is about five pints. The disagreeable taste, and the obstinate constipation, which follow such a diet, generally disappear after three or four days if enemata be used instead of aperients by the mouth. After three or four days of milk-diet, and if the case be purely renal, without cardiac and pulmonary complications, and with no dropsy, it is well to begin giving a cold douche daily, taking care at the time to protect the lumbar region. At first, the duration of the douche should be fifteen seconds, proceeding to twenty, twenty-five, and thirty seconds, which is the maximum. After the douche, the patient must be rubbed down very energetically, made to dress quickly, and then take a certain amount of walking exercise. The patient should wear flannel drawers and waistcoat.

After having persevered in the milk-treatment for about a month, and if the albumen have diminished considerably, it is advisable to allow, in the middle of the day, a little broiled meat, with herbaceous vegetables, a little bread, and a glass of red wine, deprived of all acidity. No eggs must be on any account given, and at least three pints of milk must still be taken during the day. The douche treatment and regular exercise are still to be kept up, and the urine must be carefully examined; for, should the albumen increase after the alteration of the diet, the patient must at once go back to the milk, and have recourse to a special treatment, involving the inhalation of oxygen in doses of 30 litres daily, performed at about three sittings a day. If after two or three weeks nothing have been gained by this method of treatment, the author resorts to drugs, using two or three grammes of tannin in pill during the twenty-four hours, or doses of gallic acid to the extent of half a gramme to one gramme daily. If these do not answer, 10 drops of tincture of perchloride of iron (increasing to 25 or 30) are given twice a day, with a pill containing 2 centigrammes of nux vomica in the intervals. This dose may be increased to 6 or 8 or even 10 centigrammes in the day. In cases of great urgency the author advocates general venesection, which should be repeated in twelve or twenty-four hours according to symptoms. In cases where the urgency is not so marked, he finds great advantage in the use of a compound of scammony jalap and turpeth mineral, called *Eau de vie Allemande*, which may be given in doses of 30 to 40 grammes. It produces an effect in two hours. The author concludes by making a few remarks on the necessity of giving the milk-diet a good trial, and of not being disheartened if, at first, it disagree with the digestion. RICHARD NEALE, M.D.

ARTICLE 4078.

JACOBI ON TYPHOID FEVER IN THE YOUNG.

IN a paper in the *Archives of Pediatrics*, vol. ii., No. 3 (and pamphlet, Potter, Philadelphia), Dr. Jacobi says that the number of cases admitted to the Belle Vue Hospital in the two years ending October 1884 was twenty-five, of whom fourteen were females. The ages were from 2 to 14, with an average of 9 years. Five had relapses, and three others were sick from four to six weeks without interruption of the symptoms. In seven, the disease was ushered in with a chill. The other conditions were present in the following proportion: ileo-cæcal pain, 14; diarrhœa, 15; blood in stools, 3; constipation, 6; epistaxis (first week), 6; enlarged spleen, 16; roseola, which made its appearance from the fifth to the tenth day and lasted from five to ten days, 14. Premonitory symptoms were reported in nine cases, and death ensued in five. The mortality was, therefore, 20 per cent.; but, allowing for the greater severity of cases sent to hospital, the real mortality of the disease in childhood is probably much less than this, and the symptoms generally are less pronounced than in adults. The author agrees with Gerhardt, in thinking that this is due to the disease being transmitted to children chiefly through the lungs, owing to their drinking but little unboiled water [how about milk epidemics?—*Rep.*].

The pathological changes were correspondingly slight; as a rule, only the region of the ileo-cæcal valve was affected. The case of a girl, aged 11 years, is, however, given, in whom death ensued upon perforation of the bowel, although diarrhœa was absent throughout.

The symptoms belonging to the nervous system, such as restlessness, coma, or delirium, were marked in only five or six of the patients. The temperature was seldom very high, and it followed, as a rule, anything but the orthodox curve. The author noted in some a double daily curve; in others, evening remissions; and, in a third class, normal temperature after the twelfth or fourteenth day. When the spleen remained large, a relapse was anticipated. Of the complications, those involving the lungs were the commonest and the most serious. The bronchial catarrh, which, moreover, appeared earlier than in adults, was very liable to develop into bronchitis or broncho-pneumonia. Gangrene was rare, and hypostatic pneumonia not frequent; but pulmonary œdema sometimes terminated a very adynamic case. Cerebral hyperæmia was present in cases which combined high fever with adynamia.

The treatment, in general expectant, may have to be directed against the elevation of temperature, the loss of blood, the diarrhœa, or the insufficiency of nutrition. A high temperature need not be much considered if the daily remissions be well marked, as these afford the system an opportunity of recovering itself. Further, if the heart continue strong, the pulse good, and not too frequent, antipyretics are not called for. If the heart be weak, cardiac stimulants will reduce the temperature by promoting surface-circulation, and, consequently, radiation. One of the best of these is caffeine, if by the mouth or rectum the bromide or citrate, but for hypodermic use the salicylate or benzoate of caffeine and sodium. Caffeine regulates the heart's action, promotes diuresis, and increases arterial pressure. From its greater solubility, it acts more rapidly than digitalis; but it is also more evanescent, and should be given in small doses, frequently repeated. Other methods of reducing temperature are cold packing, of which the best form for infants is a simple wet towel wrapped round it, and covered by a small blanket—the towel to be changed every few minutes; half an hour of this treatment will reduce the temperature from 106° to 101°. Ordinary cases do well with the friction of cold wet towels. Cold baths are dangerous when the heart is weak, or the extremities cold, and should never be repeated after the latter remain cool.

Of drugs, antipyrin and salicylate of soda are perhaps the best; kairin is useless, and quinine often unsatisfactory, though sometimes it aids the action of the salicylate. Hæmorrhage must be dealt with by ice and compression externally; bismuth, opium, iron, lead, or alum internally; and ergotin subcutaneously. The diet must consist of liquid and digestible food at regular intervals. Alcoholic stimulants will generally be indicated, and collapse, if speedy and powerful interference be demanded, must be met by subcutaneous injections of alcohol, camphor (in spirit, ether, or oil), or camphor and caffeine. [In the absence of detailed notes, one cannot but feel some doubt about the diagnosis of the abortive cases.—*Rep.*]

RALPH W. LEFTWICH, M.D.

ARTICLE 4079.

SIRENA AND PERNICE ON THE TRANSMISSIBILITY OF TUBERCULOSIS BY THE SPUTUM.*

PROFESSOR SIRENA, Director of the Institute of Pathological Anatomy in the University of Palermo, has, jointly with his assistant, Dr. Pernice, made some very interesting experiments as to the transmissibility of tuberculosis by means of tubercular sputa. Four sets of experiments were carried out. In the first two groups of experiments, rabbits and guinea-pigs, respectively, were made by a special apparatus to inhale the vapour arising from tuberculous sputa. The results were altogether negative. In the next group of experiments, the liquid that evaporated from the sputa was collected. In this liquid, however, the most careful examination failed to reveal tubercle-bacilli. The only things that could be occasionally found by microscopic examination were shapeless masses coloured by vesuvine, aggregations of small spores readily coloured violet, and sometimes larger round spores of amorphous substance isolated or in groups. Notwithstanding the negative results of microscopic examination, this liquid was injected or otherwise applied to five guinea-pigs, one rabbit, and one dog. The results were uniformly negative. In the fourth and last series of experiments, the sputa were desiccated by the heat of the sun and then gently pulverised. Guinea-pigs made to inhale this pulverised tuberculous sputum did not appear in any way the worse; and when killed did not exhibit any tubercular lesion.

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* *Gazzetta degli Ospitali*, March 29, 1885.

The experiments are practically summed up in the conclusions drawn by the author. 1. The liquid obtained by the evaporation of tubercular sputum is always free from Koch's tubercle-bacillus; therefore, when placed upon the cornea, injected into the subcutaneous cellular tissue, or into the peritoneal cavity, it does not give rise to tubercle. 2. Tubercle-bacilli do not rise in an atmosphere moving over moist tubercular sputa, even when the sputa are very rich in bacilli. 3. The respiration for several hours, or even for several days, of tubercular exhalations does not give rise to phthisis in animals. 4. Animals obliged to respire an atmosphere charged with the dried dust of tubercular sputum do not catch phthisis. 5. The subcutaneous injection of tubercular sputum produces for the most part a specific abscess, as is proved by the presence of the tubercle-bacillus in the pus; then, after a variable period, it produces tuberculosis of the abdominal and thoracic organs. 6. Injection of tubercular sputum into the peritoneum produces at first local and then general tuberculosis, capable of successive inoculations in animals. 7. The injection of solutions of tubercular sputum into the trachea, even in animals affected with broncho-pneumonia, does not cause a specific infection, but for the most part a septic croupous pneumonia, characterised by the existence of micrococci in the exudation.

[Some of the experiments appear to prove too much. For example, some of the animals gained in weight when submitted to conditions that must in any case be looked on as unsanitary. Another point that should be noted is that all the experiments with the dust of dried sputum failed.—*Rep.*]

WILLIAM R. HUGGARD, M.D.

ARTICLE 4080.

EULENBURG ON THE ETIOLOGY AND TREATMENT OF TABES DORSALIS, ESPECIALLY IN ITS RELATION TO SYPHILIS.

IN a paper on this subject, published in Virchow's *Archiv*, Jan. 1885, Professor Eulenburg, of Berlin, begins by stating that, since the publication of Erb's views in 1879, he has taken especial care to consider the question of syphilis in all cases of tabes that have come under his observation. As a result of this, the author has collected and now publishes full particulars of 125 cases of tabes treated by himself from January 1880 to July 1884; only those cases being included in which—besides other symptoms—permanent loss of knee-jerk was noted. Of the 125 cases, 91 were private and 34 hospital patients. As regards sex, there were 106 males and 19 females (17 of whom were married and 2 single). The age at which the disease appeared to have begun, so far as could be learned from the history, was as follows: below the age of twenty years, none; between twenty and thirty, 24 cases; between thirty and forty, 53 cases; between forty and fifty, 37 cases; and between fifty and sixty, 11 cases. As regards syphilis, in 67 of the 106 men there was no evidence of that disease having ever been contracted; while in the remaining 39 there had been a hard sore, followed by general constitutional syphilis in 28, and venereal sores (probably soft chancres) without general symptoms in 11. In the 28 cases of undoubted syphilis the interval between the syphilis and the first symptoms of tabes was between one year and two years in (?) one case, two years in one case, three years in five cases, four years in one case, five years in two cases, six years in three cases; seven, eight, and (?) nine years in one case each; ten years in two cases; eleven years in one case; twelve years in two cases; fourteen, sixteen, and eighteen years in one case each; nineteen years in two cases; and in the remaining two cases twenty-two and twenty-nine years respectively. Only one of the 19 women could be proved to have had syphilis.

With regard to causes other than syphilis, it was ascertained that in 15 out of the 125 patients there was some inherited neuropathic tendency. Atmospheric influences—such as chills and exposure to wet—were assigned as causes in 48, either alone or in conjunction with bodily strain or exertion due to the patient's occupation, travelling, campaigning, or similar circumstances. Severe mental depression was indicated in 16 of the 125; injury was the cause assigned in six; there was some deformity of the spinal column in four. In five cases, acute diseases (typhoid four times and dysentery once) were given as causes of the tabes; general debility and exhaustion, produced by various local or general disorders, dissolute habits of life, &c., were present alone or combined in 13 cases; while in three (men) excess *in Baccho et Venere* had preceded the symptoms of tabes. Only two cases out of the 125 were cured. Both these patients were syphilitic. One recovered under specific treatment; the other under injections of strychnine, electricity, and Chapman's spinal-bag, after specific treatment had failed.

Since the foregoing statistics were completed, the author states that he has seen three more cases of tabes in women, and that all of them had without doubt suffered from syphilis.

Dr. Eulenburg concludes his papers with the following propositions, in which are embodied his present views on the subject of tabes and syphilis.

1. There is an absolute and relatively somewhat large percentage of tabetic patients who have suffered from syphilis; the number of these is considerably larger than was generally admitted until within the last few years. 2. The exact relation of syphilis to tabes is uncertain. Probably in most cases syphilis acts only as a debilitating predisposing cause, like many other agencies—such as heredity, mental affections, &c.; but perhaps in some instances syphilis is the direct cause of tabes. 3. At any rate, syphilis can hardly be considered to be the most frequent and most important cause of tabes. 4. The cases of tabes which have been preceded by

syphilis present no constant and characteristic symptoms, nor any peculiarity in their course, by which they can be distinguished from other (non-syphilitic) cases. 5. As regards prognosis and treatment, also, there is no clear and characteristic distinction between the two classes of cases. Those with syphilitic antecedents may in certain circumstances improve, perhaps even recover, either with or without specific treatment; whilst, as a rule, such treatment is either of no avail or only attended by temporary benefit. 6. The investigation of the etiology and pathogeny of tabes in relation to syphilis, which has been prominent of late years, has not yet afforded any definite solution of the question; nor, according to the experience of the author, can the discussion be said to have yet led to any permanent result as regards the best treatment of tabes.

ARTHUR COOPER.

ARTICLE 4081.

SMITH AND GROSS ON EXCISION OF THE KNEE IN DEFORMITIES OF THE LEG.

DR. STEPHEN SMITH, of New York, read a paper on 'Excision of the Knee in Preference to Amputation in certain Deformities of the Leg,' at a meeting of the New York State Medical Society, in December 1884.

There were a certain class of cases, he said, in which the question of excision at the knee, or amputation at or below that point, was to be determined. They were those cases in which the leg was rendered useless for locomotion; closely allied to those cases of deformity and displacement in which there was chronic inflammation, and the weight of the body could not be borne on the limb. The solution of the question would depend upon two points; the comparative safety of the two operations, and the comparative usefulness of a stump after an amputation at the knee-joint, and at a point immediately above or below that point. Out of fourteen cases of partial excision, but two patients died, which was a mortality of only 2 per cent., showing a difference of 8 per cent. in favour of excision. In a large collection of cases, amputation below the knee gave a mortality of 34 per cent., and amputation above the knee a mortality of 63 per cent. Although these figures showed that excision was by far the less dangerous, for purposes of comparison he would place them on the same footing. Perhaps the greatest weight of authority on the question had been furnished by the late Dr. Hudson, of New York, who was employed by the Government for several years. Much as he favoured artificial limbs, he always regarded an ankylosed knee as more serviceable than a stump to which an artificial limb might be adjusted. In the light of these facts, conclusions might be formulated in regard to these operations as follows: that excision at the knee-joint was quite as safe as amputation above or below that joint; that excision of the knee-joint was to be preferred to amputation, by which the leg was rendered useless.

Dr. S. W. Gross, of Philadelphia, took it that excision of the knee-joint was not the proper operation in all cases of deformity of the knee; for instance, in cases of ossification or synostosis of the joint he saw no necessity for resorting to excision at all. In such cases it had been his practice, and that of his father, the late Prof. Samuel D. Gross, to make an incision across the knee, and break up the osseous union with a chisel. Then the patella could be separated from its adhesion to the femur by force applied to it through a towel interposed. Then, on account of the danger of rupturing the popliteal artery, it was not safe to attempt to straighten the limb entirely at once, but it was best to bring the foot down only so far as was necessary to make the toes touch the floor; the heel, he thought, should swing about an inch above the floor. Even this it was safer to accomplish gradually, at several operations, the patient being anæsthetised each time. This operation, he thought, should be more widely practised in preference to excision, as had been taught by the late Professor Gross, in his *Surgery*. In regard to the statistics brought forward by the reader of the paper, he would say that they had been materially changed within the last five or six years, and no surgeon who resorted to antiseptic precautions would expect to have a mortality of more than 3 or 4 per cent. after amputation of the leg.

SURGERY.

RECENT PAPERS.

4082. MAHOMED.—Improved Fastenings for Elastic Bandages. (*Brit. Med. Jour.*, Feb., p. 386.)

4083. ROBSON.—Traumatic Urethral Stricture cured by Excision. (*Brit. Med. Jour.*, March, p. 481.)

4084. HAMILTON.—Retraction of the Testicle into the Abdomen. (*Brit. Med. Jour.*, March, p. 535.)

4085. REEVES.—The Rapid Cure of Dupuytren's Contraction by Excision. (*Brit. Med. Jour.*, March, p. 481.)

4086. WHERRY.—A Successful Operation on a Remarkable Cicatricial Band. (*Lancet*, March, p. 516.)

4087. PYE.—A Case of Recovery from Spontaneous Gangrene. (*Brit. Med. Jour.*, March, p. 656.)

4088. TIVY.—The Treatment of Goître by Injections of Iodine. (*Brit. Med. Jour.*, March, p. 653.)

4089. MACHADO, VIRGILIO.—A Case of Aneurysm of the Thoracic Aorta Treated with Good Result by Galvano-puncture. (*O Correio Medico*, Jan. 1, 1885.)

4090. BOSSI.—On some Cases of Traumatic Tetanus Treated in S. Pietro Ward of the Ospedale Maggiore of Milan from 1879-1884.

4091. VERTEL.—A Case of Spontaneous Fracture of a Rib in a Pregnant Woman. (*Russkaia Meditzina*, No. 9, 1885, p. 184.)

4092. BERG.—On the Treatment of Gonorrhœal Orchitis by White Clay. (*Sbornik Permskaho Zemstva*, 1885, Jan. 15; and the *Vratch*, No. 11, 1885, p. 135.)

4093. SCHÆFFER, L. D.—On the Treatment of Anthrax after Dr. J. V. Jarnovsky's Method. (*Vratch*, No. 10, 1885, pp. 146-48.)

4094. VON HACKER.—A Case of Actinomycosis. (*Wiener Med. Blätter*, No. 17.)

4095. BÖCKEL.—On Cholecystotomy. (*Sem. Médic.*, 1885, No. 17.)

4096. CHAVASSE.—Laparotomy in Cases of Rupture of the Intestine without External Wound. (*Sem. Médic.*, 1885, No. 17.)

4097. CLEAVER.—Trephining in Traumatic Epilepsy. (*American Practitioner.*)

ART. 4082. *Mahomed on Improved Fastenings for Elastic Bandages.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 386, Mr. G. S. Mahomed writes that he has adopted a very simple plan for fastening elastic bandages, so as to do away with the tapes by which such bandages are usually fastened. This plan is merely to attach two shirt-buttons on the webbed end, and to supply with each bandage a piece of fine red rubber about fifteen inches long, with a double row of holes punched out at each extremity. One end is fastened over the shirt-button, and may remain so permanently; the other is then passed round the leg, and brought over the buttons again, and so secured.

4083. *Robson on Traumatic Urethral Stricture cured by Excision.*—In the *Brit. Med. Jour.*, March 1885, p. 481, Mr. Mayo Robson lays down a new rule with reference to the treatment of stricture of the urethra. 'All narrow strictures of the urethra may be cured by excision, if situated anterior to a point half an inch in front of the membranous urethra—easily if behind the scrotum, without much difficulty if covered by the scrotum, or even if penile.' Mr. Robson gives notes of a case in which he excised a traumatic stricture in a man aged 48. The operation was performed on May 29. The patient was placed under ether, in the lithotomy position; a Wheelhouse's staff was passed, and the urethra laid open for half an inch in front of the stricture, which was carefully divided, and the urethra laid open for half an inch behind this. The stricture was thus fully exposed; it consisted of a fibrous cicatricial band about one-fourth of an inch wide, involving the mucous membrane, submucous tissue, and bulb tissue. The whole of the cicatrix was excised, and the cut ends of the mucous membrane were drawn together over the gap thus formed, and secured by continuous catgut-suture; a catheter being then passed into the bladder. A month later, a No. 13 sound was able to be passed, and the patient was quite well. In six months No. 13 was again passed without a hitch, so that a complete cure was the result of the operation. [A case similar to Mr. Robson's is reported in the LONDON MEDICAL RECORD, 1883, p. 503.—*Rep.*]

4084. *Hamilton on Retraction of Testicle into Abdomen.*—In the *Brit. Med. Jour.*, March 1885, p. 536, Surgeon-Major Hamilton records the case of a soldier, aged 21, who, when riding barebacked, was suddenly thrown on to the withers of his horse. He at once felt sick, and was obliged to dismount. On examination, it was found that the right testicle had been retracted into the right inguinal region. An attempt was made to bring down the organ, but the patient could not endure the necessary manipulation. Soon afterwards the man had to go to stool, and, on giving a bend to the left side, the testicle slipped up into the abdomen. For the next few days he was kept in bed, and after being under observation for some weeks he was placed on duty, but shortly reported himself as again sick, and stated that, when lifting a sack of corn, the testicle came partly down, giving him great pain. He, however, soon recovered, and was sent back to dismounted duty, his condition being as follows. The left testicle was in its normal position, the right could not be felt, the scrotum at that side having tightened up till it had almost disappeared. The author questions as to the best means of further treatment, and considers that it would be wise to perform an operation with a view of occluding the canal and preventing the return of the testicle; or, if the organ did come down, it might be possible to get it into the scrotum and to keep it in its place by means of a truss, or even by passing threads across the canal, and thus exciting sufficient inflammation to close it.

4085. *Reeves on the Rapid Cure of Dupuytren's Contraction by Excision.*—In the *Brit. Med. Jour.*, March 1885, p. 481, Mr. Reeves records a case in which he performed excision of the band causing Dupuytren's contraction in a lady. The patient was aged 45, and first noticed a thickening in the palm, with contraction of her right ring-finger, at the age of 32. The contraction increased and prevented her from using the hand. While she was under an anæsthetic Mr. Reeves made an incision through the skin, down to the band, and along its entire length. The skin was then separated from the band, which was thoroughly isolated, except at its ends, and divided at its upper end. The finger was then straightened, and the band freely excised; the edges of skin were carefully adjusted with fish-gut sutures, and the hand placed in a long back-splint for the forearm and hand, with the fingers fully extended. The wound healed by first intention; within three weeks the patient was able to play the piano and to write letters. [In August 1884 Dr. Gersuny (*Wiener Med. Wochensch.*) gives details of this operation, which is there described as an original idea.—*Rep.*]

4086. *Wherry on a Successful Operation on a Remarkable Cicatricial Band.*—In the *Lancet*, March 1885, p. 516, Mr. G. Wherry records the following interesting case. In November 1882, a gentleman, aged 24, consulted the author on account of a large cicatricial bridge, which joined together the buttocks, overlapping the anal orifice. There was a long sinus-like tunnel extending beneath it, with two openings—the one near the anus, and the other over the sacrum. The band, which in the narrowest part measured seven inches in circumference, was the result of a scald in infancy, owing to the nurse having dipped his buttocks in boiling water. The patient was placed under ether, and the band cut in the middle line. The wound was plugged with carbolised oiled lint, so as to prevent the granulating surfaces from uniting together, and a perfect recovery followed.

4087. *Pye on a Case of Recovery from Spontaneous Gangrene.*—In the *Brit. Med. Jour.*, March 1885, p. 656, Mr. W. Pye records the case of a man, aged 50, who recovered from gangrene of the scrotum. The illness began with shivering, followed by inflammation about the penis. Twenty-four hours later, gangrene was present. In four days the gangrenous swelling burst, and discharged an offensive fluid. At this period the patient was first seen by Mr. Pye, and there was very extensive gangrene, involving the penis, scrotum, perinæum, and parts around. External urethrotomy was performed. On the ninth day the slough came away, leaving the testes and penis bare. A week later an abscess formed in the left iliac fossa, and burst. Two months afterwards, the parts exposed became completely covered by the action of natural processes alone. It was suggested by Dr. Ord that at the root of the disease there was a condition allied to noma; but Mr. Pye thought it was an instance of quasi-spontaneous gangrene.

4088. *Tivy on the Treatment of Goître by Injections of Iodine.*—In the *Brit. Med. Jour.*, March 1885, p. 653, Mr. Tivy writes that he does not agree with Mr. Horsley's recent remarks on the treatment in cases of ordinary goître. Mr. Tivy states that he has never met with any bad results from injecting, and gives his experience of the use of iodine injection in adenomatous goîtres. This is limited to thirty-three cases, which were injected 290 times, with thirty to sixty minims of tincture of iodine for each injection, giving an average of nine injections for each case. In most cases both lobes of the thyroid were goîtrous, and therefore both were injected at each sitting. In all the cases the goîtres were considerably reduced, the majority being cured in from three to six months. In performing injection for goître, the spot best adapted for puncture is between the anterior jugular vein and the sterno-mastoid muscle on each side. Care must be taken to have sharp and clean needles, and all chance of air entering by the syringe must be carefully prevented.

Richard Neale, M.D.

4089. *Machado on a Case of Aneurysm of the Thoracic Aorta Treated with Good Result by Galvano-puncture.*—A. B., porter, on admission, was found to have a convex swelling close to the right border of the sternum, in the third intercostal space; pulsation was clearly felt; on auscultation, the normal sounds were heard in the aorta, but exaggerated; there was no murmur. The symptoms began after a fall, and were made worse by carrying a heavy weight. It was determined to try galvano-puncture. The aneurysm, judging from its position in relation to the axis of the aorta, was probably sacciform, and therefore a very suitable case for this method of treatment. The galvano-puncture was used four times at intervals of eight days. Three needles were inserted for 2 centimètres into the tumour; the needles were isolated with gold-varnish, and were connected with the positive pole for ten minutes. The circuit was made by the application of the negative pole to the region of the spine. The current employed was from a Reyniger's pile, and sufficient elements were used to produce 2 cubic centimètres of mixture of gases (hydrogen and oxygen) from the decomposition of water acidulated by sulphuric acid, 1 to 30, in Gaiffe's voltameter. A water rheostat and a double rheophore were used, so as to be able to augment progressively and slowly the intensity of the current without breaking it. During the operation there was no accident; the pulse was quickened, probably from nervousness; no eschars were produced at the point of introduction of the needles. In the two days following the operation the tumour seemed to be more swollen, but afterwards became harder and smaller in area; the pulsations were still visible. After the last operation the tumour was much smaller, but still pulsatile. The patient then left the hospital, but came up for examination every week. His general state was much improved; he slept well, whereas before he could only get a few moments' repose when lying on his back; and he could walk uphill without fatigue. Eight months later, the improvement was still maintained.

4090. *Bossi on some Cases of Traumatic Tetanus Treated in the S. Pietro Ward of the Ospedale Maggiore of Milan from* 1879-1884.—Chloral in large doses, quinine, and the warm bath formed the treatment. Of twelve cases, ten recovered and two died. Bossi recognises the good effect of chloral in large doses; 12 grammes a day were given to adults; it was at the same time also applied to the wounds; occasionally it was given hypodermically in the dose of 1 gramme in 2 of water. The administration of ether-vapour by the rectum was tried in one case, but the patient died.

G. D'Arcy Adams, M.D.

4091. *Vertel on a Case of Spontaneous Fracture of a Rib in a Pregnant Woman.*—Dr. Vertel, of Samara (*Russkaia Meditzina*, No. 9, 1885), reports the case of a healthy and strong woman, aged 27, who, in the tenth month of her fourth pregnancy, during a moderate attack of cough, suddenly felt intense pain in her left side. On examination, a fracture of the left eighth rib was found. The fracture united by the end of two weeks. The patient suffered from slight bronchitis and caries of the second molars, both of the affections having developed themselves during the pregnancy. [For similar cases *see* Dr. R. Neale's *Medical Digest*, sect. 694: 1.]

4092. *Berg on the Treatment of Gonorrhœal Orchitis by White Clay.*—Following the instance of Dr. S. Lukashevitch (*see* the London Medical Record, Nov. 1884, p. 492), Dr. Berg, of Perm (*Sbornik Permskaho Zemstva*, Jan. 15, 1885; and the *Vratch*, No. 11, 1885) treated several cases of gonorrhœal orchitis by the application of cakes made of white clay with water. He obtained very encouraging results. The symptoms rapidly yielded to the treatment, and the patients got up mostly on the third day.

4093. *Schæffer on the Treatment of Anthrax by Subcutaneous Injections of Carbolic Acid.*—In the *Vratch*, No. 10, 1885, p. 146, Dr. L. D. Schæffer, of Ranenburg, details three severe cases of facial anthrax successfully treated by subcutaneous injections of a 2 per cent. solution of carbolic acid, as recommended by Dr. J. V. Jarnovsky. (*See* the London Medical Record, Nov. 1884, p. 499.) In one of the cases, seventy-two syringefuls were injected in seven sittings during five days; in another, ninety-two and a half syringefuls, in seven sittings, during four days; and in the remaining case, fifty-four syringefuls, in five sittings, during three days. In each of the cases the injections were discontinued with the fall of temperature to the usual level. Only one of the patients complained of pains produced by the injections. In another patient (a woman) there were formed two small superficial sloughs and an abscess at the spots of puncture. The favourable issue in all three cases is ascribed by the author wholly and solely to the method used. Of fourteen other cases of anthrax, treated by him after an old plan (deep incision with subsequent cauterisation by fumant nitric acid) four died. Dr. Schæffer suggests the same plan of treatment in cases of phlegmono-purulent diphtheria.

V. Idelson, M.D.

4094. *Von Hacker on a Case of Actinomycosis.*—Dr. von Hacker (*Wiener Med. Blätter*, No. 17) reports a case of actinomycosis clearly traceable to infection. The patient had had the charge of two cows, one of them suffering from an abscess of the jaw, which he opened. Some months later he observed a small round swelling in his own tongue, which, when incised, was found to contain a quantity of granular matter, that under the microscope showed the characteristic appearances of actinomycosis. There is little doubt that, with care, all such cases could be traced to direct infection.

E. F. Willoughby, M.B.

4095. *Böckel on Cholecystotomy.*—According to a communication made by the author at the Congress of French Surgeons (*Sem. Médic.*, 1885, No. 17, p. 142), the operation is extremely simple in cases of biliary fistula; but when there is no fistula, it is only to be done after very careful examination. The presence of a tumour, the course of the affection, and, if necessary, the exploratory puncture, are important elements in the diagnosis. It is hardly possible as yet to say whether cholecystotomy or cholecystectomy is to be the usual operation.

4096. *Chavasse on Laparotomy in Cases of Rupture of the Intestine without External Wound.*—The author has made a communication on this subject at the Congress of French Surgeons (*Sem. Médic.*, 1885, No. 17, p. 143), and has come to the following conclusions. Laparotomy is to be performed at once, whenever there is a rupture of the intestine without wound of the abdominal wall. If the solution of continuity be small (less than one-half of the circumference), the edges must be stitched together, after which a drainage-tube is fixed in the abdominal cavity. If it be large, the gut is to be fixed to the edges of the wound, so as to favour the formation of an artificial anus. J. S. Keser, M.D.

4097. *Trephining in Traumatic Epilepsy.*—Dr. W. W. Cleaver (*American Practitioner*, 1885) reports the case of a young man who, sixteen years earlier, had received a kick from a horse over the right orbital arch. He stated that he had been 'kicked by horses and left for dead,' on four different occasions, and as a consequence of one of these occurrences, he presented a second depression in the right parietal bone. The injury to the orbital arch had been inflicted sixteen years earlier, and he had been for several years liable to convulsions; he was then free for ten years, but after this period he began to have epileptic convulsions, and when he applied for treatment in January 1884, he had from three to five epileptic convulsions daily. Dr. Cleaver trephined over the depression in the frontal bone, as the patient 'was confident that this was the spot where his trouble lay.' A very thin spiculum of bone was found imbedded in the dura mater; this had to be picked away piecemeal. Good drainage was established; the temperature only once rose above 100°, and the patient made a good recovery. The day after the operation, the patient twice felt some slight symptoms of a fit, but had no seizures, and had remained well up to the date (not stated) when the report was made. Dawson Williams, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

4098. Brydon.—Tincture of Benzoin in Influenza. (*Brit. Med. Jour.*, March, p. 682.)

4099. Biddle.—The Application of Corrosive Sublimate and Glycerine in Epithelioma of the Cervix Uteri. (*Brit. Med. Jour.*, March, p. 653.)

4100. Baber.—The Action of Cucain on the Nasal Mucous Membrane. (*Brit. Med. Jour.*, March, p. 479.)

4101. Smith.—On Testing Cucain. (*Brit. Med. Jour.*, March, p. 479.)

4102. Cullimore. — Cascara Sagrada in Obstinate Constipation. (*Lancet*, March, p. 502.)

4103 Finlay. — Iron and Arsenic in Progressive Anæmia. (*Lancet*, Feb., p. 374.)

4104. Thompson.—Glycerine as a Solvent for Podophyllum Resin. (*Lancet*, Feb., p. 413.)

4105. Dixon.—Carbolic Acid in Indigestion. (*Brit. Med. Jour.*, March, p. 483.)

4106. Hüllmann. — On Permanganate of Potash Baths. (*Archiv für Kinderheilk.*, Band vi., Heft 3.)

4107. Larrea y Quezada.—Simulo in the Treatment of Epilepsy. (*El Boletin Medico*, Trujillo, Peru, Jan. 16, 1885.)

4108. Arcari, A.—The Hypodermic Employment of Iodide of Sodium. (*Gazz. Med. Ital. Lombard.*, March 7, 1885.)

4109. Gasparini.—Salicylate of Soda in Pleurisy. (*Gazz. Med. Ital. Lombard.*, March 14, 1885.)

4110. Doyon.—The Treatment of Alopecia. (*France Médicale*, Dec. 13, 1884.)

4111. Fronstein, M. A.—Cucainum Muriaticum in Laryngeal, Aural, and Nasal Practice. (*Russkaia Meditzina*, 1885, No. 6, pp. 115-16; and No. 7, pp. 137-39.)

4112. Von Schröder.—On Pelletierine. (*Archiv für Exper. Pathol. und Pharmak.*, 1884, No. 3.)

4113. Bartholow.—The Physiological Effects and Therapeutic Uses of Hydrastis.

Art. 4098. *Brydon on Tincture of Benzoin in Influenza.*—In the *Brit. Med. Jour.*, March 1885, p. 682, Dr. W. Brydon endorses the remarks made by Mr. Kebbell in the *Journal* of February 28 in recommending the use of an inhalation of tincture of benzoin in cases of common nasal catarrh. Dr. Brydon tried the inhalation on himself at the beginning of an attack of influenza, and obtained relief in a very short time. The uncomfortable stuffy feeling of the nostrils and other symptoms speedily disappeared, and after repeating the inhalation several times no trace remained of the catarrh by the evening. Dr. Brydon tried the inhalation on two of his patients, and met with as good results.

4099. *Biddle on Applications of Corrosive Sublimate and Glycerine in Epithelioma of the Cervix Uteri.*—In the *Brit. Med. Jour.*, March 1885, p. 653, Mr. D. Biddle writes that few methods in the way of palliative treatment have given him so great satisfaction as the use of a lotion or injection, containing one-fourth of a grain of corrosive sublimate and half an ounce of glycerine to a pint of water, in cases of epithelioma of the cervix uteri. In one case, the use of this lotion almost stopped the hæmorrhage during the last three months of the patient's life, and gave great relief from the agonising pain of the tumour. The beneficial change is attributed to the very marked reduction in the amount of the infiltration present in these cases.

4100. *Baber on the Action of Cucain on the Nasal Mucous Membrane.*—In the *Brit. Med. Jour.*, March 1885, p. 479, Mr. Cresswell Baber writes that he has found that cucain not only acts as a local anæsthetic to the nasal mucous membrane, but also has the power of contracting the vascular erectile bodies on the turbinated bones. Two cases are described, in which the effect of cucain was most marked. One occurred in a youth aged 19. On examination of the nose, the right inferior turbinated bone was found to be considerably swollen at its anterior part; this was painted with a 4 per cent. solution of hydrochlorate of cucain. After three minutes, the anterior extremity was decidedly less swollen, and more of the middle body could be seen. A globular prominence was visible on the inner surface of the inferior turbinated bone, at some distance from the anterior nares. This swelling was painted with a 4 per cent. solution, and five minutes later the swelling had become pale and much diminished in size, so that the whole of the lower part of the middle turbinated bone could be plainly seen. More than a quarter of an hour later the inferior turbinated body continued collapsed, and the globular prominence on its inner surface had almost disappeared. The other case was just as successful.

4101. *Smith on Testing Cucain.*—In the *Brit. Med. Jour.*, March 1885, p. 479, Mr. Percy Smith contributes an article on some of the characteristic properties of cucain, by which a given solution may be tested as to its purity. Cucain-hydrochlorate is soluble in chloroform, ether, and alcohol. It does not crystallise from chloroform, but from ether, and, better still, from alcohol. The crystals, when viewed by the microscope, present nothing peculiar to distinguish them from other alkaloids with monoclinic crystals in a radial form. There is one peculiarity, however, about the crystals : viz., the hydrochlorate and the free base both assume the same form. The results of other tests are these. 1. No coloration is produced with sulphuric acid nor on the addition of potash-bichromate. 2. There is no coloration with nitric acid. 3. With phosphomolybdic acid a yellowish-white precipitate is produced, soluble in ammonia and in hot nitric acid. 4. With phosphotungstic acid it gives a gelatinous white precipitate, soluble in ammonia.

4102. *Cullimore on Cascara Sagrada in Obstinate Constipation.*—In the *Lancet*, March 1885, p. 502, Dr. Cullimore writes that he attaches great importance to the fact, that he finds much use from the combination of capsicum with cascara sagrada. Capsicum does away with the griping which is often met with when cascara is used. There is, however, a great difference in the action of many preparations of the drug, and every new supply that is obtained should be tested by the physician himself, so that he may know the action of the preparation.

4103. *Finlay on Iron versus Arsenic*; *a Case of Progressive Anæmia.*—In the *Lancet*, Feb. 1885, p. 374, Dr. D. W. Finlay records a case of progressive anæmia occurring in a man, aged 45. The patient stated that he had been becoming pale for the last seven months, and was troubled with shortness of breath on exertion. On examining the blood, the corpuscular richness was only 23 per cent. The patient was put upon arsenic (five minims of liquor arsenicalis three times a day), which was soon increased to eight minims. This treatment was continued for some time without the slightest benefit. Dr. Finlay then ordered him three grains of dried sulphate of iron in pill, thrice a day. In ten days' time the blood showed a richness of 47·8 per cent., and after about one month of this treatment its richness reached 72·8 per cent. The patient was soon sent to a convalescent home, and returned about three months after the first commencement of the iron treatment, with a corpuscular richness of 91·2 per cent.

4104. *Thompson on Glycerine as a Solvent for Podophyllum Resin.*—In the *Lancet*, Feb. 1885, p. 413, Mr. C. J. S. Thompson writes that he has found glycerine a good solvent, and an admirable vehicle for the administration of podophyllum resin. Four grains added to one ounce of glycerine, gently heated till the resin dissolves, produce a clear solution, and makes a pleasant preparation.

4105. *Dixon on Carbolic Acid in Indigestion.*—In the *Brit. Med. Jour.*, March 1885, p. 483, Mr. J. F. Dixon states that he has found a solution of carbolic acid of great value in cases of indigestion, associated with tenderness of the stomach, acidity, and flatulence. A solution of 2 minims of acid to an ounce of water, with the addition of 5 grains of carbonate of soda, and 25 minims of aromatic spirit of ammonia, is the form in which the author administers this remedy. It is also of great use in the dyspepsia of tea-bibbers. [Mr. Dixon's observations confirm those of Drs. Godfrey, Habershon, Berkart, and others. *See Medical Digest*, sect. 864 : 6, also Creasote 841 : 2.—*Rep.*]

RICHARD NEALE, M.D.

4106. *Hüllmann on Permanganate of Potash Baths.*—In June 1879 a well-developed child, two years of age, was brought to Dr. Hüllmann (*Archiv für Kinderheilk.*, Band vi., Heft 3), covered with eczema and impetigo. He had been sent from Berlin to Halle to try the baths there, but after three weeks he was worse instead of better. He was therefore prescribed an immersion-bath of permanganate of potash, of the strength of fifteen grains to a pail of water, the child to remain in it until the fluid began to turn brownish. Fourteen days afterwards, he was cured. [It is not stated how many baths were given.—*Rep.*] Since then, Dr. Hüllmann has used the remedy both in adults and in children, and mostly with good effect. He has not confined its use to eczema, but has employed it also in prurigo, intertrigo, and the desquamating stage of measles, scarlatina, and varicella. When the skin is much covered with scales or scabs, it should be well brushed with soap-and-water first. For convenience of use, he keeps a concentrated solution made with hot water.

RALPH W. LEFTWICH, M.D.

4107. *Larrea y Quezada on Simulo in the Treatment of Epilepsy.*—In the first number of *El Boletin Medico*, published at Trujillo, Peru, Dr. Larrea y Quezada recommends the treatment of epilepsy by an Indian remedy, 'simulo,' which is the fruit of *Capparis Coriacea*, a plant indigenous in Peru. *Melochарn*, a conserve made from another plant belonging to the same natural order, is also used in epilepsy. Of the powdered simulo, 45 grammes are mixed with 500 grammes of sweet sacramental wine, and of this a wineglassful is to be taken night and morning. In his own case, this treatment was most successful. As a boy, aged 13, he had fourteen epileptic attacks, preceded by a distinct aura, but under this treatment the fits left him. Since he has been in practice he has employed simulo extensively in epilepsy, hysteria, and other nervous diseases.

4108. *Arcari on the Hypodermic Employment of Iodide of Sodium.*—Iodide of sodium in doses varying from 30 to 80 centigrammes to 1 gramme, dissolved in 1 gramme of water, is well borne. By the larger doses slight pain is occasioned, but no swelling or other local reaction. As much as 130 to 160 centigrammes may be given in this way where a prompt and powerful action is needed; this would be equal to 4 to 5 grammes by the mouth. Injections of iodide of potassium are not so well tolerated, and give rise to great pain and hardness at the site of injection. Intramuscular injections of bichloride of mercury, as used by Auspitz in the treatment of syphilis, cause no pain, and it is well to follow the same plan in injections of iodide of sodium. The patient at the most experiences for three or four minutes a sensation of burning. The gluteal region is the best site for injections.

4109. *Gasparini on the Use of Salicylate of Soda in Pleurisy.*—Dr. Gasparini has found that salicylate of soda, possibly from its great sudorific power, is of much use in pleurisy, rapid reabsorption of the exudation taking place. Acute articular rheumatism, pleurisy, and tonsillitis, &c., occur most frequently during damp cold weather. The rheumatic poison may determine not only in one person tonsillitis, in others pleurisy, &c., but these manifestations may occur simultaneously, or follow each other in the same individual. Thus, tonsillitis is often the forerunner of acute articular rheumatism and of inflammation of the pleura. In support of this hypothesis is the success obtained by Hormazdia with salicylate of soda in tonsillitis. In rheumatic tonsillitis, that is, tonsillitis provoked by the irritative action of cold and damp, he considers salicylate of soda a specific. He gives it internally and as a gargle, and narrates fifty-seven successful cases. In tonsillitis due to specific causes, *e.g.* belladonna-poisoning, sewer-gas, &c., erysipelas and scarlatina. it has not the same effect. In pleurisy, where diaphoretic treatment is indicated, salicylate of soda is well worthy of trial.

4110. *Doyon on the Treatment of Alopecia.*—The author thinks that pressure, by causing alterations of the follicles, leads to some forms of alopecia. Thus, for example, the calvities limited to the vertex, in women especially, is to be attributed to the pressure exercised on that region by their various fashions in head-gear. In this variety of alopecia he has used the following formula with great success. ℞ lactic or citric acid, 0·5 to 1 gramme; boracic acid, 2 to 5 grammes; distilled water, 220 grammes; rectified spirit, 32 to 40 grammes. To be well rubbed in for two or three minutes twice a day. The following pomade may also be used:—℞ lactic acid, 0·25 to 0·75 gramme; boracic acid, 2 to 3 grammes; lard, 125 grammes; olive-oil, 5 grammes. To be rubbed in for three minutes twice a day. After two or three weeks of this treatment, he recommends this pomade to be substituted. ℞ powdered carbonate of soda, 0·75 to 2 grammes; lard, 25 grammes; olive-oil, 5 grammes. To be rubbed in for three minutes twice a day. This treatment must be followed for a year.

G. D'ARCY ADAMS, M.D.

4111. *Fronstein on Hydrochlorate of Cucain in Laryngeal, Aural, and Nasal Practice.*—In the *Russkaia Meditzina*, Nos. 6 and 7, 1885, Dr. M. A. Fronstein, of Moscow, writes that he used Merk's hydrochlorate of cucain in more than fifty laryngeal, aural, and nasal cases, and arrived at the general conclusion that the value of the drug is extremely exaggerated by recent authors.

Aural Cases.—In the ear, a 5, or 10, or 20 per cent. solution in water and spirit of wine was employed; in cases of paracentesis of the tympanic membrane, warmed drops were instilled and left in contact with the parts for several minutes; in the cases of removal of small polypous excrescences from the tympanic cavity, the solution was introduced into the latter by means of a cannula and Pravaz's syringe. Anæsthesia ensued, but it remained quite superficial even after five or six successive applications. The introduction of an aural probe as well as other instruments became painless, but the division of the tympanic membrane, or removal of polypi was as painful as in a non-cucainised ear.

Nasal Cases.—When a cucain solution (the strength of which is not stated by the author) was applied to the anterior two-thirds of the nasal cavity, rapid collapse of the swollen inferior turbinated body ensued, in consequence of which inspection of the region, as well as application of the cautery and ecraseur to the parts, became easy. A superficial cauterisation was painless, but a deeper one, or tightening a cutting loop, caused as much pain as in a non-cucainised nasal cavity. The collapse of the turbinated body (with the removal of nasal mucus and alleviation of breathing) disappeared in chronic rhinitic cases within ten to thirty minutes; in acute rhinitis, the effects of cucain lasted longer (sometimes for an hour and a half or two hours). Both in acute and in chronic rhinitis, cucain acted solely as a palliative remedy, being quite unable to cure the morbid process. Dr. Fronstein, however, admits that in cases of acute rhinitis in infants cucain is a most valuable remedial agent (*see* also Dr. Semtchenko's paper in the LONDON MEDICAL RECORD, April 1885, p. 154). Having tried cucain in thirty cases of posterior rhinoscopy (in which he painted the root of the tongue, both surfaces of the soft palate, and the posterior wall of the pharynx, with a 5 or 20 per cent. ointment or water-and-alcohol solution, five, ten, or twelve successive times at intervals of five minutes), the author came to utter disappointment. In none of the cases was he enabled to obtain such a degree of anæsthesia of the parts as could allow him to perform a calm and attentive examination of the naso-pharyngeal cavity. He found cucain to be a weak anæsthetic means, which can diminish only morbid sensibility, but cannot produce any influence on tactile sensibility. Meanwhile, the main difficulty met with during rhinoscopic examination consists just in a high reflex irritability of the parts, with an easy answer to every tactile stimulation. Hence the author concludes that 'in posterior rhinoscopy cucain is of no use whatever.'

Laryngeal Cases.—An identical conclusion is reached by the author in regard to laryngoscopy and laryngoscopic operations. He admits some therapeutic value of cucainisation only in laryngeal tuberculosis with painful swallowing; the drug, however, produces only a palliative action, and does not cure the disease.

V. IDELSON, M.D.

4112. *Von Schröder on Pelletierine.*—The author has studied (*Archiv für Exper. Pathol. und Pharmak.*, 1884, No. 3) the action of this drug on several living specimens of tænia serrata placed in a solution of chloride of sodium and bicarbonate of soda at the temperature of the body. Five minutes after the addition of 1-10,000th part of pelletierine to the fluid the tæniæ became motionless, but they soon recovered when taken out of the solution. When left for ten minutes or more in the solution containing pelletierine, they were entirely deprived of their vitality. In the second part of his paper, the author gives the result of his experiments on frogs, pigeons, and rabbits. Pelletierine produces in them an exaggeration of the reflex movements and some troubles of co-ordination; it also causes a considerable increase of the blood-pressure, so that its use is contra-indicated in aneurysm and atheroma.

J. S. KESER, M.D.

4113. *Bartholow on the Physiological Effects and Therapeutic Uses of Hydrastis.*—The principal action of the drug is excito-motor, increasing perception and cutaneous and reflex excitability, in large doses causing death (in animals) by tetanus of the respiratory muscles. This action is spinal, and not peripheral. On the heart hydrastine acts first by paralysing the motor and then the inhibitory apparatus. Its action is thus seen to be similar to that of strychnine, but the action of hydrastis is less powerful and of longer duration than that of strychnine. The therapeutic uses of hydrastis naturally resemble those of strychnine. It is useful particularly in atonic dyspepsia, acting centrally as a nerve tonic and locally as a preventive of fermentation, the latter action being similar to that of quinine. The best preparation is the fluid extract, which may be used in doses of ten to twenty drops before meals.

MEDICINE.

RECENT PAPERS.

4114. WEST.—Fatal Hæmoptysis. (*Brit. Med. Jour.*, Feb., p. 436.)

4115. JACKSON.—Periostitis following Typhoid Fever. (*Brit. Med. Jour.*, Feb. p. 428.)

4116. ALLBUTT.—On Migraine. (*Med. Times and Gazette*, Feb., p. 203.)

4117. GIBBINGS.—A Case of Remarkably Slow Pulse with Epileptiform Seizures. (*Lancet*, Feb., p. 288.)

4118. FINLAYSON.—The Occurrence of a Diastolic Murmur of Aortic Origin apart from Aortic Incompetency or Aneurysm. (*Brit. Med. Jour.*, Feb., p. 426.)

4119. THOROWGOOD.—Asthma Caused by the Smell of a Cooked Hare. (*Brit. Med. Jour.*, Feb., p. 378.)

4120. WILLIAMS.—A Case of Scarlet Fever with Extensive Sloughing of the Neck. (*Lancet*, February, p. 380.)

4121. NOTLEY.—Syncope, and a Method of Averting it. (*Lancet*, March, p. 472.)

4122. WARNER.—Urticaria and Asthma. (*Brit. Med. Jour.*, March, p. 483.)

4123. KNOX.—Two Cases of Hernia of the Lungs into the Neck. (*Lancet*, March, p. 515.)

4124. SPERINO.—Analogy between Syphilis and Rabies. (*Gazz. degli Ospitali*, April 12, 1885; *Gazz. dei Cliniche.*)

4125. FERRER Y GENOVÈS.—Prognosis in Trichinosis. (*Gaceta de los Hospitales*, June 1884; *Gazz. degli Ospitali*, March 29, 1885.)

4126. LEWI, E. S.—On an Epidemic of Mumps, and Two Cases of Relapsing Fever Complicated with Orchitis during the same Epidemic. (*Vratch*, No. 9, 1885, pp. 129-30.)

4127. TÜMPOVSKY, MARIAN D.—On Disappearance of Ascites under the Influence of Erysipelas. (*Vratch*, 1885, No. 9, p. 131.)

4128. CHAUFFARD.—The Cause of Catarrhal Icterus. (*Annales Méd.-Chir.*, 1885, No. 1.)

4129. GÉRARD.—The Symptoms Caused by Lessening of the Pressure of Air. (*Gaz. Méd. de Paris*, 1885, No. 11.)

4130. LIÉGEOIS.—A Curious Case of Hiccough Cured by the Extraction of Nine Needles from the Epigastrium. (*Revue Méd. de l'Est*, Jan. 4, 1885.)

4131. VINEY.—The Incubation of Small-pox. (*Gaz. Hebdom. de Méd. et de Chir.*, 1885, No. 9.)

4132. SÉE.—Cardiac Hypertrophy produced by Rapid Growth of the Body.

4133. LEUDET.—On Pulmonary Tuberculosis. (*Gaz. des Hôp.*, 1885, No. 44.)

4134. MILLOT-CHARPENTIER.—Hydrophobia following the Bite of a Rat. (*L'Union Méd.*; and *Wien. Med. Blätter*, Jan. 15.)

4135. LEYDEN.—Hydatid of the Liver bursting through the Lung. (*Deutsche Med. Wochensch.*, Jan. 15.)

ART. 4114. *West on Fatal Hæmoptysis.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 436, Dr. Samuel West gives the statistics of fatal cases of hæmoptysis which occurred at the Chest Hospital, Victoria Park, during the last fifteen years. Cases due to rupture of one of the large arteries, other than the pulmonary, into the trachea or bronchi, or through the lung, as in thoracic aneurysm or new growth, are excluded. The cases numbered twenty-six; males twenty, females six. The predisposing condition of the lung was chronic phthisis, and often without much clinical evidence of the disease. Fatal hæmoptysis was rare in subacute, and perhaps never occurred in acute, phthisis. In seventeen cases the cause was ascertained. In eleven it was aneurysm, and in six an ulcerated vessel. The lesion was on the left side about twice as often as the right. The source of the hæmorrhage was not necessarily found on the side most affected, or in the part most diseased. Any cavity, whatever its origin or shape, might be the source of the hæmorrhage, provided it were chronic, but the favourite seat was in the middle of the lung near the periphery. The causes of non-fatal and of fatal hæmorrhage may probably be the same, there being evidence to show that both pulmonary aneurysms and eroded vessels might heal spontaneously.

4115. *Jackson on Periostitis following Typhoid Fever.*—In the *Brit. Med. Jour.*, Feb. 28, 1885, p. 428, Mr. E. Jackson quotes a case of periostitis following typhoid fever, in a gentleman aged 42. The patient suffered from a severe attack of enteric fever, the temperature not coming down to normal until the thirty-fourth day. On the following day there came a relapse, and it was not until the sixtieth day of the attack that the temperature again became normal. About three months afterwards, the patient complained of pain in the front of the chest, accompanied with thickening of the third rib. This increased gradually, and eventually became soft and fluctuating, until suppuration set in, and pus began to discharge, and continued to do so for several weeks; so that, a year after the commencement of the original attack, the patient had a deep depressed scar over the third rib. Sir James Paget remarks that he has never seen periostitis follow any other fever but typhoid fever, nor has he seen after typhoid fever any corresponding number of cases of large lymph-glands, diseased joints, or other diseases of mere debility, such as may follow any acute illness, and he is led to question whether each fever has not its own proper sequel. (*Vide* LONDON MEDICAL RECORD, March 1885, p. 101.)

4116. *Allbutt on Migraine.*—In the *Med. Times and Gaz.*, Feb. 1885, p. 203, Dr. Clifford Allbutt contributes an article on migraine. By this term is meant a headache occurring on one side of the head, and generally associated with stomach-disturbance. In its ordinary form the headache begins in the morning, with a sense of oppression, which gradually in the forenoon is changed into a more acute and throbbing pain, attended with nausea. Later in the day the headache gradually passes off with vomiting; and next morning, after a night's rest, the patient wakes up well, and is free from an attack for a more or less certain interval of days or weeks, when the symptoms repeat themselves. The author then goes on to compare migraine with other diseases, and finds that it resembles epilepsy in great measure, and gout as well as some periodic neuroses in a lesser measure. 'Migraine, like epilepsy, like gout, like any other malady which has periods of quiescence and periods of explosion, must be due to the rupture of inhibition by some external or relatively external irritant, which is either abnormally active in itself or meets with abnormally weak resistance.' The above statement is carefully sifted and commented upon by the author, who then passes on to the treatment. In Dr. Allbutt's experience two drugs seem to be useful. 1. Guarana, given in two or three doses at short intervals, answers best in those cases which begin with some slight warning in the early day. 2. Croton-chloral is the other drug; this should be given in repeated doses until twenty grains in all have been taken. As migraine is a disorder that originates in childhood, the hope of a cure must be based upon a healthful life, a healthful growth, and a healthful education. With regard to tonics, it is stated that a combination of bromides with quinine has answered best; then come cannabis indica and ergot, and after these chloride of ammonium. One important point concludes the lecture—viz., the fact that many observers have shown how migraine is sometimes due to strain from some local defect in the eye; and Mr. Hewetson has lately produced several patients who had been cured of migraine by correction of astigmatism. [A series of interesting cases where optical defects were the exciting cause of migraine are noted in sect. 1815:2 of the *Medical Digest.—Rep.*]

4117. *Gibbings on a Case of Remarkably Slow Pulse with Epileptiform Seizures.*—In the *Lancet*, Feb. 1885, p. 288, Dr. A. J. Gibbings relates the case of a man aged 66, who consulted the author in May 1882, for weakness and difficulty of breathing, especially on exertion. He complained of attacks of dyspnœa at night, and a troublesome cough. Urine was normal; the pulse intermittent and about 60. He continued under treatment for two months, and improved somewhat, but in October he was confined to the house with bronchitis, chiefly at night. The author was then struck by the slowness of the pulse, which was 44, and quite regular. In January 1883 he was seen in consultation with Sir Andrew Clark, as he had become worse. He now complained of dyspnœa on the least exertion; the pulse was 34, regular, and synchronous with the heart's beat; he was ordered to take considerable quantities of nourishing food. Notwithstanding this, the sensations of faintness became very frequent, the pulse steadily declined in frequency, and a new symptom developed itself—viz., frequent epileptiform attacks. The face became deadly pale, the pupils dilated, and the eyes fixed; the pulse ceased to be felt at the wrist; the face then flushed all over, the pulse returned, and clonic convulsive tremors lasted for five or six seconds. These attacks became more frequent, when Dr. Moxon saw the patient, and recommended nitro-glycerine and atropia, but without any benefit; next he advised bromide of potassium in thirty-grain doses, but this made the patient worse. The pulse fell to 13, then to 12 on Jan. 28, when a considerable amount of albumen was found in the urine, and it was decided to discontinue all medicines. The patient improved somewhat, and the albumen soon cleared away. After this he was able to do two or three hours' work at his books, the pulse improved, and varied from 30 to 34. On March 6, while at stool, the patient fainted and died in two or three minutes. A *post mortem* examination was made, but nothing could be found to account for the symptoms. Dr. Bristowe, at p. 448, gives notes of a somewhat similar case.

4118. *Finlayson on the Occurrence of a Diastolic Murmur of Aortic Origin apart from Aortic Incompetency or Aneurysm.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 426, Dr. Finlayson insists on the gravity and importance of a diastolic murmur in cardiac disease, and states that until lately he has always laid down the rule that a diastolic murmur was diagnostic of aortic valvular incompetence, except in those cases where it was due to aneurysm or dependent on pericardial friction. Lately, however, two cases have been met with which somewhat misled him. The first was one of extreme dyspnœa, with symptoms of angina, and marked evidence of enlargement of both sides of the heart. There was also albuminuria, but scarcely any dropsy. On examination, a very loud double murmur was detected all over the sternum, and the author concluded that he had a case of aortic regurgitation to deal with. The patient died a few days after he was first seen, suffering from extreme dyspnœa, and, at times, violent delirium. At the *post mortem* examination it was shown that the diagnosis was essentially wrong. The heart was indeed enlarged (27¾ oz.); the left ventricle was more hypertrophied than the right; but the primary mischief seemed to be in the kidneys, both of which were contracted and granular, with abnormal development of the connective tissue. In the pelvis of the left kidney a large calculus was found, which had caused this kidney to be more atrophied than the other. The aortic valves were examined very carefully, and were found to be quite competent. There was no indication of disease in the valvular structure. The aorta was dilated, and the surface rough and atheromatous. The author states that Dr. Bellingham was the first to notice murmurs arising from disease of the aorta, apart from valvular lesions; and he explains it as due to the onward passage of the blood against the dilated, rigid, and diseased aorta during the systole of the heart, and to the regurgitation of the blood over the same surface, coming from the large branches into the rigid tube of the aorta, prior to the closing of the semilunar valves. Dr. Finlayson also reports a second case in which a diastolic murmur, of a booming quality, could be heard at the aortic cartilage, and over the lower half of the sternum. The pulse gave no indication of aortic regurgitation, and the idea was suggested that the murmur was due to a dilated aorta. The patient died soon afterwards; the *post mortem* examination showed the heart greatly enlarged. The aortic valves were quite competent; the valvular structures were not thickened anywhere. The aorta was much dilated and highly atheromatous, with calcareous plates and deposits of fibrine. These two cases afforded, in the author's mind, conclusive evidence of the existence of a double murmur, and particularly of a diastolic murmur, of aortic origin, apart from aneurysm and apart from valvular incompetency.

4119. *Thorowgood on a Case of Asthma Caused by the Smell of a Cooked Hare.*—Dr. Thorowgood, in the *Brit. Med. Jour.*, Feb. 1885, p. 378, writes that a gentleman, from boyhood, has been liable to attacks of spasmodic asthma. He is now about 40 years old, and finds that the presence in his room of a hare or its skin will bring on a severe attack. Not only this, but the smell of a roasted hare is even a more speedy cause of an asthmatic seizure than the furry coat of the animal.

4120. *Williams on a Case of Scarlet Fever with Extensive Sloughing of Neck.*—In the *Lancet*, Feb. 1885, p. 380, Mr. A. T. Williams records the case of a boy, aged 6 years, who was brought to him on Oct. 23, 1883, suffering from sore-throat. There was slight ulceration of both tonsils, with enlargement of the glands of the neck. There was some fever, but no rash, nor desquamation. On Oct. 25 the child was no better, the temperature was 102° F. On the 28th the throat symptoms had much increased, and the temperature was 103° F. The glands in the neck became larger and more tender, and by Nov. 5 they showed signs of fluctuation. On Nov. 7 an abscess was opened, but only a small quantity of pus came away. The next day, the skin over the glands in the left anterior triangle of the neck sloughed, and exposed the carotid vessels in their sheath. The cavity was syringed out with weak Condy's fluid, and dressed with iodoform; the patient was put on port wine and nourishing diet, and gradually improved, so that by the end of December the cavity had quite healed. The child commenced to peel a few days after Mr. Williams first saw him, leaving no doubt as to the presence of scarlet fever. There was, however, no albumen in the urine. The interesting point in the case was the perfection of the repair after so great a destruction of tissue.

4121. *Notley on Syncope and a Method of Averting it.*—In the *Lancet*, March 1885, p. 472, Dr. W. J. Notley divides cases of syncope into two classes; 1. those due to some mechanical obstruction to the circulation arising in the heart itself, or in the great vessels springing from it; and, 2, those which are the result of various impressions made either on the peripheral nerves, or on the emotional centres in the cerebrum. It is in the second class of cases that the author suggests a simple means of averting the attack of syncope; and that is, by applying heat to the top of the head. It is stated that, if anyone get into a bath at a high temperature, he will feel faint in a few minutes, but if he will only immerse the head, all feeling of faintness rapidly passes off, and the bath can be tolerated for half an hour without any inconvenience. [The value of heat to the epigastrium is noted in the *Medical Digest*, sect. 790 : 5; and in the *Lancet*, Dec. 1884, p. 1079, Mr. Benham advises hot water to the brow as an efficient remedy in syncope during administration of chloroform.—*Rep.*]

4122. *Warner on Urticaria and Asthma.*—In the *Brit. Med Jour.*, March 1885, p. 483, Mr. P. Warner notes that, in a case of urticaria recently under his care, attacks of asthma and of severe vomiting occurred several times during the illness. On two occasions patches of the eruption were noticed upon the fauces, and the author considered the attacks of asthma and vomiting to be due to the presence of similar patches on the mucous membrane of the bronchial tubes and stomach. Another interesting fact in connection with this case was the occurrence of an attack of acute rheumatism in the seventh week of the illness, and the disappearance both of the eruption and of the rheumatism four days after the administration of salicylate of soda.

4123. *Knox on Two Cases of Hernia of the Lungs into the Neck.*—In the *Lancet*, March 1885, p. 515, Surgeon-Major Knox describes two cases of displacement of the lung into the neck. The first occurred in a thin, delicate man, aged 22. He had been healthy up to Dec. 1882, when he was admitted into hospital with bronchial catarrh, and remained 146 days under treatment. In Feb. 1884, while on the march, he had a violent fit of coughing, and felt something give way in the left side of the neck. After a short rest he walked back to camp, and discovered a tumour above his left clavicle, of the size of a hen's egg. The man continued on duty until June 1884, when he presented himself at hospital complaining of slight pain in the chest, with dyspnœa on exertion and dry cough. The tumour was examined, and found to be soft and compressible. On auscultation, respiratory sounds were audible over it, accompanied by a small dry crackling râle. The whole left lung was emphysematous. The patient remained in hospital until Dec. 1884, during which time the hernia increased to the size of a large orange, but the general condition remained the same. The second case occurred in the practice of Dr. Wilkie. The patient was an Indian, who was admitted into hospital suffering from fever and general debility, and who frequently had attacks of asthma. Six days afterwards the man died suddenly from syncope, about half an hour after returning from the latrine. At the *post mortem* examination, the left lung was found to be emphysematous, especially along the anterior border and at the apex. The right lung was emphysematous on the anterior border; the apex was protruded beneath the clavicle into the neck, and was dilated into a translucent tumour, about the size of a man's fist, in which most of the alveolar structure of the lung had disappeared. [An interesting series of cases of pneumatocele may be consulted in section 644 : 5 of the *Medical Digest.*] RICHARD NEALE, M.D.

4124. *Sperino on the Analogy between Syphilis and Rabies.*—Professor Sperino draws a parallel between these two diseases. After pointing out the importance of the lymphatic system in regard to infective virus generally, he indicates several features wherein syphilis and hydrophobia agree. Hardness of the lymphatic glands before the development of the disease, and a prolonged incubation are common to both affections. Hardness round the wound in hydrophobia corresponds to the hard sore in syphilis. Marochetti's vesicles would correspond to the mucous patches of syphilis. Hydrophobia, according to the author, is transmitted hereditarily as well as syphilis. The lack of transmission by the milk is also mentioned as another point of agreement. Eleven cases of mad-dog bite are mentioned, in which there was hardness of the lymphatic glands. Mercurial frictions over the bite removed this condition, and no other symptoms arose. One child had several bites; and, owing to some of the wounds having been neglected, the first symptoms of hydrophobia appeared. They yielded, however, to mercurial frictions. The author concludes, however, that these eleven cases do not warrant a proclamation of the prophylaxis of rabies. The enucleation of the indurated glands is advised.

4125. *Ferrer y Genovès on Trichinosis.*—From an analysis of several cases, the author draws some inferences as to the prognosis in cases of trichinosis. The disease presents several degrees of severity. In the mildest form, there is merely gastro-intestinal disturbance, accompanied or followed by œdema of the muscles affected; the symptoms, however, not lasting long and not compelling the patient to keep his bed. Between this form and the fatal forms there are many gradations. The malignity of the disease is in proportion to the amount of trichinosed meat taken, provided suitable conditions be present for the development of the parasite. Vomiting and diarrhœa are favourable symptoms, unless continued so long as to exhaust the patient. Frequent easy expectoration is a good sign. Tolerance of food after anorexia, and the reappearance of sleep, warrant a very hopeful judgment. The symptoms of myositis depend on the muscles attacked. The position of the patient in bed, and the greater or less gravity of the illness, are also affected by this cause. Mental depression continues till convalescence is far advanced. Certain phenomena, such as alteration of the colour of the skin, swelling of certain regions, and the frequency of the pulse, have little value in prognosis. If the febrile state last twenty days or more, the case is grave. Coldness of surface for two or more days, with a subjective sense of heat accompanied by marked prostration, certainly indicates a fatal issue.

WILLIAM R. HUGGARD, M.D.

4126. *Lewi on an Epidemic of Mumps, and on Two Cases of Relapsing Fever Complicated with Orchitis.*—In the *Vratch*, No. 9, 1885, p. 129, Dr. E. S. Lewi, of Krementchug, publishes a report of a small epidemic of mumps which broke out amongst newly arrived artillery recruits about the end of January 1884. The epidemic lasted till the beginning of March, and attacked 19 of 147 soldiers. In 12, parotitis alone appeared; in 3, parotitis and afterwards orchitis (in 2 of the right testis, and in 1 of the left); and in 4. orchitis alone (in 2 of the right, and in 2 of the left testis). In 6 patients, parotitis attacked only one gland (in 4, the right, and in 2, the left parotid gland); in the remaining 9 cases, both of the glands were affected. None of the patients attacked by orchitis alone suffered from parotitis, gonorrhœa, syphilis, or injury of any kind. The duration of the disease varied between 5 and 12 days. All the patients completely recovered (without suppuration) under treatment by camphorated oil, and ointment with iodide of potassium. Dr. Lewi contributes, also, two cases of relapsing fever, which occurred at the same barracks during the said epidemic of mumps, and which were complicated with orchitis of the right testis. The complication supervened on the second and the third days of the fever. In both of the cases a complete recovery followed in 16 and 18 days. In one of the patients, relapsing fever developed at the end of ten days after his recovery from double parotitis.

4127. *Tümpovsky on Disappearance of Ascites under the Influence of Erysipelas.*—In the *Vratch*, 1885, No. 9, p. 131, Dr. Marian D. Tümpovsky, of St. Petersburg, relates the case of a student, aged 21, with general dropsy, ascites, and albuminuria of several months' standing, in whom, four weeks after his admission, erysipelas of the left half of the abdomen supervened. Simultaneously, the daily quantity of the urine rose from 900 cubic centimètres to 3,250, while its specific gravity fell from 1,025 to 1,012; the albumen entirely disappeared, and gradual diminution of the general dropsy and ascites followed. On his recovery from erysipelas (at the end of ten days), the patient was also free from all dropsical symptoms. They were still absent when he left town five weeks later.

V. IDELSON, M.D.

4128. *Chauffard on the Cause of Catarrhal Icterus.*—The author does not believe that the swelling of the ductus choledochus in consequence of a simple gastro-duodenal irritation is sufficient to explain the appearance of jaundice. Several days, generally five or six, elapse before the discoloration of the skin becomes manifest. The quantity of urea in the urine is at first diminished, and then increased; after a time, it diminishes again until it becomes normal. Albuminuria is not very rare. Basing himself on these considerations, the author (*Annales Méd.-Chir.*, 1885, No. 1) comes to the conclusion that catarrhal icterus is a general disease, probably caused by the absorption of ptomaines formed in the alimentary canal in consequence of abnormal fermentative processes. In his opinion these ptomaines, acting on the liver, produce catarrhal inflammation and obstruction of the biliary ducts.

4129. *Gérard on the Symptoms Caused by the Lessening of the Pressure of Air.*—During the construction of a bridge at Cubzac the author (*Gaz. Méd. de Paris*, 1885, No. 11) had occasion to observe the effects produced on the workmen by the lessening of the pressure of air. When the diminution was gradual, no unpleasant symptoms were caused. When it was rapid, the men often complained of giddiness, itching of the skin, pains in the limbs, swelling of the joints or muscles, and paralysis. Sudden diminution of the pressure sometimes produced no immediate effects, but after a quarter of an hour a fainting fit was often observed. Very sudden diminution may cause instantaneous death.

4130. *Liégeois on a Curious Case of Hiccough Cured by the Extraction of Nine Needles from the Epigastrium.*—The author has described in the *Revue Méd. de l'Est* (Jan. 4, 1885) a case of intractable hiccough in a nervous and irritable woman, aged 21. The paroxysm lasted twenty-four days, and was so violent that the whole body was shaken, and the noise could be heard at a distance of forty yards. Bromide of potassium and ether had been given without success. Chloral and hyoscyamine produced a temporary improvement, but the paroxysms reappeared after a time. Opium and atropia were then administered, and the hiccough ceased for about a month, when a new attack occurred. Five months later, a small abscess formed in the epigastric region, and a needle, which projected through the skin, was extracted by the patient's sister. An incision was then made by Dr. Liégeois, who found eight other needles in the subcutaneous tissue. This operation was followed by a complete cure, but the author is unable to state whether the needles had been swallowed or introduced under the skin by the patient herself.

4131. *Viney on the Incubation of Small-pox.*—According to the author (*Gaz. Hebdom. de Méd. et de Chir.*, 1885, No. 9) the average duration of incubation is about eleven days; in the hæmorrhagic form, however, it rarely exceeds one week. When a patient is vaccinated during the period of incubation, the disease runs a milder course, but vaccination after the apparition of the rash produces no appreciable effect.

4132. *Sée on Cardiac Hypertrophy produced by Rapid Growth of the Body.*—Prof. G. Sée has observed in a large number of young men violent palpitations of the heart, which made him fear that they would be unfit for military service. Experience showed him, however, that the palpitations were not increased by exertion, and that, on the contrary, they tended to disappear gradually as the men got stronger. In these cases the palpitations were accompanied by a loud systolic murmur, which could be heard at the apex, but not over the large vessels. The heart was enlarged, the pulse sometimes irregular. In some cases there was dyspnœa or frontal headache. As regards the treatment, regular exercise, without fatigue, is to be enjoined; iodide of potassium and convallaria majalis sometimes do good.

4133. *Leudet on Pulmonary Tuberculosis.*—The author has recently communicated to the Académie de Médecine (*Gaz. des Hôp.*, 1885, No. 44, p. 348) the results of his researches, which are based on the careful observation of 312 cases, belonging to 143 different families of Rouen. Pulmonary tuberculosis sometimes attacks one member of a healthy family, and in this case it is generally found that the patient has been weakened by some previous affection; bronchitis and pneumonia do not seem to have more influence than other diseases. Heredity was found in one-half of the cases, and in the majority of them the mother was affected; but the danger is greatest when both parents are tuberculous. Hereditary tuberculosis generally appears between the ages of 13 and 35. Apparently healthy children of tuberculous parents may transmit the disease to their offspring. Tuberculous affections of the bones and joints is found in 20 per cent. of the families. Contagion seems to be rare, as it has only been observed by M. Leudet in 7 out of 68 families. It is remarkable, however, that children of tuberculous families often die in quick succession. The duration of the disease is much longer in rich than in poor people, but shows no relation to heredity. Recovery is rare, though possible in all stages, and in hereditary as well as in acquired cases.

J. S. Keser, M.D.

4134. *Millot-Charpentier on Hydrophobia following the Bite of a Rat.*—The *Wien Med. Blätter* of Jan. 15 reports on a case related by M. Millot-Charpentier in the *Union Médicale*, of hydrophobic symptoms following the bite of a rat. A young sailor, aged 20, engaged in the coasting trade in France, was bitten during sleep some time in December 1883, by a large grey rat, first in the upper lip and then four times in the left hand. The wounds healed quickly and kindly, not having even bled; but after a fortnight swelling came on in the bitten hand, combined with fever and diaphoresis. These passed off, but returned again in the course of a few days, to be followed, on January 30, by a sudden appearance of purpuric spots on the bitten arm, the thorax, and the back. These disappeared under the influence of collodion and acid drinks, but during the whole time the patient was subject to nervous dysphagic attacks, during which the face became congested, a constriction was felt at the throat, with whistling respiration from closure of the glottis, and he could neither speak, swallow, nor breathe freely. On Feb. 27 he came under the care of M. Millot-Charpentier, who at once thought of hydrophobia, an idea which had not been present to the patient's mind at all. He was then very anæmic, with purpuric spots, a daily recurrence of the nervous symptoms, and an attack of fever every three or four days, lasting for some hours. He was ordered a tablespoonful of a 1 per cent. solution of permanganate of potash three times a day, 9 grains of quinine every evening for fourteen days, and afterwards on alternate evenings, and once a week a saline purge in some bitter infusion, with nitrogenous diet, exercise, and medicinal doses of alcohol. In the course of the next month he had only two severe attacks, but on March 28 a small tumour, of the size of an egg, and of a violet colour, appeared in the region of the last rib on the injured side, accompanied by more ecchymosed spots. With this was combined excessive muscular weakness, so that, when seated, he was unable to rise without assistance. The treatment was continued with good results; the condition gradually improved, and in November he could be looked upon as cured. While the symptoms had a great resemblance to those of hydrophobia, they were also very like those of snakebite, especially the purpura, the muscular weakness, and the great anæmia; and the case shows the connection which exists between different forms of animal poison introduced by means of a bite.

4135. *Leyden on Hydatid of the Liver bursting through the Lung.*—At the meeting of the Verein für innere Medicin on Jan. 5 (*Deutsche Med. Wochensch.*, Jan. 15), Dr. Leyden showed a specimen of bright ochre-coloured expectoration, from a case which had puzzled him a good deal. The patient was of a healthy family, and had always enjoyed good health. In Oct. 1884 she caught cold by getting wet through, and a fortnight later she was seized with a severe rigor, without, however, any sign of pulmonary mischief. A few days afterwards a sudden fit of coughing brought up a yellowish brown, bitter expectoration, which continued at intervals to be discharged. There was some dulness on the right side of the thorax posteriorly; but the expectorated matter contained neither pieces of lung nor elastic fibres, the auscultatory symptoms were not characteristic, and there were no signs of a cavity. The only similar case which Dr. Leyden could find recorded was by Von Renz, where a similar condition had existed for some days, the ochre expectoration containing hæmatoidin crystals in large numbers, and the whole gradually returning to the normal. Von Renz's case and the present one were both reckoned as abscess of the lung; but the absence of elastic fibres and the presence of brownish masses in the expectoration led Dr. Leyden to think of the possibility of hydatid of the liver, communicating with the lung. Very careful and prolonged examination of the sputa was rewarded at last by the discovery of some hydatid membranes, and the diagnosis was established, but the situation of the tumour in the liver could not be ascertained.

Alice Ker, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

4136. Cullingworth. — Case of Strangulation. (*Med. Chronicle*, vol. i., p. 577.)

4137. Falck.—Detection of Strychnine. (*Vierteljahrsschr. für Gerichtl. Med.*, Band xli., p. 315.)

4138. Zillner. — Adipocere. (*Vierteljahrsschr. für Gerichtl. Med.*, Band xlii., p. 1.)

4139. Berbes.—Carbon Disulphide Intoxication. (*La France Médicale*, 1885, p. 3.)

4140. Merget.—Mercurial Vapours. (*Revue Sanitaire*, Feb. 10, 1885, p. 33.)

4141. Favaro, G.—On a Case of Poisoning by Carbolic Acid, Cured by Injections of Ether and Inhalation of Oxygen. (*Gazz. Med. Ital. Lombard.*, Feb. 21, 1885.)

Art. 4136. *Cullingworth on Strangulation.*—Dr. Cullingworth (*Med. Chron.*, vol. i., p. 577) has placed on record an unusual case of strangulation, effected by means of the thumb and fingers applied at the sides of the neck; no mark of violence being found at the front. The necropsy on the deceased woman revealed a bruise, with extravasation, immediately beneath the lobule of the left ear, and another, also accompanied with extravasation, three-quarters of an inch below the lobule of the right ear. Corresponding to this latter bruise, a second effusion of blood had taken place into the deeper tissues, half an inch beneath the surface. Other bruises were found over each eyebrow, at the back of the right wrist, over the knuckle of the left little finger, at the inner side of the left elbow, and at each angle of the mouth. Within the mouth, at the line of reflection of the lower lip on the left side, was a contused and lacerated wound opposite the jagged stump of the canine tooth; and exactly opposite to this, at the line of reflection of the upper lip on the same side, there was another smaller bruise, accompanied with extravasation. The tongue was bruised on the right side, as though it had been caught between the teeth. The left lateral upper incisor tooth was loosened; the torn gum and effused blood showing that the injury was recent. The blood generally was dark and fluid. The brain and membranes were intensely hyperæmic, the blood pouring out in considerable quantity on removing the calvarium. There were no marks of injury to the throat, either externally or internally. The lungs were congested, and there were patches of emphysema on their surface. The heart contained a quantity of dark fluid blood. The abdominal viscera were not notably congested. Urine and fæces had escaped.

4137. *Falck on Strychnine.*—Falck (*Viertel-jahrsschr. für Gerichtl. Med.*, Band xli., p. 315) has conducted an elaborate series of experiments on the relative values of the chemical and physiological tests for strychnine, and has improved the latter test. He finds that the chemical test (colour-test) is the more delicate, reacting with $\frac{1}{1000}$th milligramme (·000015 grain) of nitrate of strychnine. Frogs vary greatly in their susceptibilities to the influence of the alkaloid. By using a very small frog a reaction may be got with $\frac{1}{200}$th milligramme (·000077 grain) of the nitrate. Much larger quantities are, however, usually required to obtain results. White mice, fourteen to sixteen days old, are the best animals to use; in them violent tetanus is produced by the subcutaneous injection of $\frac{1}{500}$th milligramme (·00003 of grain) nitrate of strychnine. Unfortunately the mice, when they attain the age of twenty days or more, are always useless for experimentation.

4138. *Zillner on Adipocere.*—In an interesting monograph on the formation of adipocere, illustrated by cases, Dr. E. Zillner (*Vierteljahrsschr. für Gerichtl. Med.*, Band xlii., p. 1) makes the following observations as to the usual course of decomposition when a human body decomposes in running water or moist earth. The periods of time fixed are, however, necessarily subject to considerable variations. The changes, in the order of their occurrence, he fixes as follows. 1. Changes in the watery constituents of the dead body; imbibition into the blood and transudation—one week to one month. 2. Breaking down of the superficial integument, then of the corium, and consequent hæmorrhagic extravasation—within 2 months. 3. Breaking up of the muscular and glandular tissues, and of the organic basis of the bones, till finally an inorganic residue alone remains, and of the fibrous and elastic tissues; mechanical removal of the products of the breaking up—3 to 12 months. 4. Decomposition of the neutral fats, mechanical removal of the fluid products (glycerine and oleic acid), crystallisation, and partial saponification of the higher fatty acids in the panniculus; transformation of the rest of the blood-pigment into crystalline pigments (especially around the blood-vessels)—4 to 12 months and onwards.

4139. *Berbes on the Pseudo-tabes of Poisoning by Carbon Disulphide.*—M. Paul Berbes (*La France Médicale*, 1885, p. 3) describes two cases of this disease which have come under his observation, and states that the specific characters of the disease were; 1. an absolute paraplegia for two months at the outset, and giving place to a want of co-ordination; 2. impediment of speech, very exceptional in true tabes; 3. nystagmus; 4. absence of urinary troubles; 5. absence of troubles of vision.

4140. *Merget on Mercurial Vapours.*—M. Merget (*Revue Sanitaire*, Feb. 10, 1885, p. 33) asserts that when mercurial vapours are breathed intermittently no toxic results ensue, and that when they are breathed continuously the symptoms produced are purely neurotic—tremor, paralysis, and convulsions. The effects of the inhalation of very finely divided mercury, not in a gaseous state, is to produce stomatitis and gastro-intestinal affections. He also attributes the beneficial constitutional remedial effects of mercury, as by inunction, to the absorption of gaseous mercury. THOS. STEVENSON, M.D.

4141. *Favaro on a Case of Poisoning by Carbolic Acid Cured by Injections of Ether and Inhalations of Oxygen.*—This was the case of a child, aged 5, who was brought to the Hospital Fate-Bene-Fratelli, two hours after swallowing a spoonful of a concentrated alcoholic solution of carbolic acid. The condition of the little patient was most grave, and death seemed imminent. Mustard plaisters had been applied, and milk given at home. One cubic centimètre of ether was injected subcutaneously, and hot bottles applied; the mustard-plaisters were repeated, and the stomach washed out with tepid water. There being no carbolic acid in the liquid flowing back from the stomach, Marsala wine, with 15 drops of Hoffmann's liquor, was injected into the stomach, but was not retained. Hypodermic injections of ether were repeated every twenty minutes, with no improvement. Three litres of oxygen were then inhaled without admixture of air. This was repeated in twenty minutes, when signs of reaction began to appear; the sensibility of the eye returned, and the breathing became more tranquil. The inhalations were continued with slight admixture of air, and the symptoms continued to improve. After two hours the patient could be taken home, having first passed about 100 grammes of dark olive-coloured urine. Vomiting continued until the next day. The quantity of ether injected was 3½ cubic centimètres, and 18 litres of oxygen were inhaled. Favaro holds that the paralysis of the respiratory centre was overcome by the oxygen, the ether helping by its stimulant action on the heart. G. D'ARCY ADAMS, M.D.

OBSTETRICS AND GYNÆCOLOGY

RECENT PAPERS.

4142 VERTEL. — On Three Cases of Anhysteria. (*Russkaia Meditsina*, No. 9, 1885, p. 184-5.)

4143. NEKHAMÈS.—On Arresting Menstrual Discharge by the Internal Use of Vinegar. (*Russkaia Meditsina*, No. 6, 1885, p. 128.)

4144. WYLIE.—Diseases of the Fallopian Tubes. (*New York Med. Record*, Jan. 24, 1885.)

4145. BOTTINI.—Total Extirpation of the Uterus by the Vagina. (*Gazz. Med. Ital. Lombard.*, Feb. 28, 1885.)

4146. CANEVA.—Proposed Operation for the Cure of Prolapsus Uteri. (*Gazz. Med. Ital. Lombard.*, March 28, 1885.)

4147. DUKE.—The Advantages of Abdominal Support during Pregnancy. (*Brit. Med. Jour.*, March, p. 282.)

ART. 4142. *Vertel on Three Cases of Absence of the Uterus.*—Dr. Vertel, of Samara (*Russkaia Meditsina*, No. 9, 1885), records three cases of absence of the uterus. One occurred in a married woman, aged 25, with normally developed external genitals. The vagina presented a blind sac, two inches long; not a trace of the womb or of the ovaries was detected. All the external diameters of the pelvis were diminished. In another married patient, aged 21, the vagina was completely absent; all the external pelvic measurements were rather short. In the situation of the uterus and ovaries only a cord, about half an inch in thickness, with a slight lump in the middle part, was found. The external private parts were normal. A third married patient, aged 25, presented a complete absence of the vagina, normally developed external genitals, and shortening of some of the external pelvic diameters. In the situation of the womb, a cord, about half an inch thick and one inch long, with small nodules in the situation of the ovaries, was felt.

4143. *Nekhamës on Arresting Menstrual Discharge by the Internal Use of Vinegar.*—In the *Russkaia Meditsina*, No. 6, 1885, p. 128, Dr. Nekhamës, of Saratov, refers to an article by Dr. W. C. Grigg, in the *Brit. Med. Jour.*, Jan. 1884, p. 56, and mentions an instance of the hæmostatic action of vinegar taken internally. A strong and healthy lady, aged 24, with regular menses of six days' duration, once happened to be invited to a ball on the third day of a catamenial period. To make herself fit for dancing, she, at the recommendation of a lady friend, swallowed a glassful of vinegar. The catamenia at once ceased, and did not return for the remaining three days. V. IDELSON, M.D.

4144. *Wylie on Diseases of the Fallopian Tubes.*—Dr. W. Gill Wylie, gynæcologist to the Bellevue Hospital, New York, read before the Academy of Medicine in that City, on January 15, an instructive communication on salpingitis. In virgins it is comparatively rare, except in catarrhal disease, especially when the internal organs are ill-developed. It is certain that gonorrhœa is a fertile source of salpingitis. Dr. Wylie has selected several well-marked cases of gonorrhœa, and watched the course of the disease from the vagina to the uterus, from the uterus to the tube and peritoneum. Pyosalpinx was very frequent, or else a gleety discharge issued from the tubes. Syphilis may cause salpingitis, just as it does otitis or ozæna. Septic poisoning after labour or abortion is one of the most frequent causes of disease of the Fallopian tubes. Simple hydrosalpinx may undoubtedly be due to other sources than catarrh of the tubal mucous membrane, or venereal taint. Dr. Wylie believes that it is generally through the tubes that septic poisoning causes local peritonitis, which is much more frequent in the posterior surface of the broad ligament towards which the tube opens, than on the anterior. Diseased tubes are very commonly associated with diseased ovaries, and in these cases the tubes are probably the first to become affected. In salpingitis, the symptoms are variable; the pains in the iliac fossæ are often very severe. Unilateral salpingitis frequently causes abortion, interfering with the enlargement of the uterus during pregnancy. Diagnosis is usually obscured by inflammatory exudations external to the tubes. Dr. Wylie believes that these can be made to disappear by keeping the patient in bed until the painful symptoms subside. Plugs of cotton-wool soaked in glycerine are then placed against the cervix, alum being added to the glycerine after a few weeks. At the end of about two months, the diseased tubes can generally be detected by bimanual palpation. If the uterine orifice of the tube be patulous, pus or gleety discharge can be made to appear in the vagina by slow pressure on the distended tube. In considering salpingitis from a purely pathological aspect, Dr. Wylie believes that it always arises from extension of disease from the endometrium. The tube first becomes engorged, and sinks lower in the pelvis. After abortion or labour at term, the bulky uterus may sink lower in the pelvis, and the fundus, owing to the patient's usual position, falls back. Should salpingitis set in, the discharge from the tubes, or even a direct continuation of the inflammation from the tubes to the peritoneum, causes a free exudation of lymph, glueing together the uterus, the tubes, and the ovaries. This lymph organises and contracts, so as to hold the uterus in its displaced position. In such cases, when they have reached a chronic stage, it is evident that pessaries can only do harm. From the nature of salpingitis, and the position of the tubes, the disease 'nearly always becomes chronic, in many instances lasting as long as the patient.' Dr. Wylie believes that in the majority of cases the only method of cure is removal of the ovary and tube on both sides. In operating, he advocates a small abdominal incision. When the omentum is adherent to the pelvic organs, the operator should not attempt to pull it up, but should pass two fingers downwards well to one side of the omentum, and then separate the adhesions. As the vessels in these adhesions come from the omentum and not from the pelvic organs to which it adheres, it is the end of the omentum that must be tied. ALBAN DORAN.

4145. *Bottini on Total Extirpation of the Uterus by the Vagina.*—On January 7 Professor Bottini successfully performed this operation in the Casa di Saluti di Porta Nuova of Milan. The patient, aged 42, suffered from medullary cancer of the uterus, and was reduced by repeated metrorrhagia to an extreme state of oligæmia. The following are the details of the operation. The patient being chloroformed and placed in the obstetric position, Professor Bottini commenced the operation. It had been determined to decollate the cervix uteri with the galvanic loop, and then to proceed to extirpation by the Czerny-Récamier process; but the great friability of the posterior segment of the neck of the uterus rendered it impossible to get valid hold of it, and on the slightest touch the bleeding was profuse. The operator, therefore, immediately changed his plan, and destroyed the whole cancerous tumour by cauterising it repeatedly with the thermo-galvanic cautery. After loss of blood was arrested at the periphery, much still flowed from the uterine cavity, so that he was obliged to introduce a cautery within the uterus, and to hold it there for several minutes until the bleeding ceased. He then began to isolate the vagina circularly from the uterus, and then to dissect the anterior wall of the womb from the bladder. After a few centimètres, however, the dissection was arrested by thick adhesions, and by a projection discovered on the anterior surface of the uterus, which afterwards proved to be an intramural myoma. The body and fundus of the uterus were much enlarged, resembling the organ at the third month of gestation. Therefore it was not easy to reach the fundus of the uterus and to turn it over. This was, however, managed with forceps. The uterine appendages being tied on each side, the entire organ was removed with a ring of the vaginal canal, and a drainage-tube applied; the vagina was washed out with a solution of sulpho-carbolate of zinc. The operation lasted one hour and a quarter. The temperature never rose above 38°·7 C., on the fourth and seventh days after. The vagina was washed out with hot solution of sulpho-carbolate of zinc (5 per 100) six times a day, until all the ligatures were detached, when it was only done twice a day. The first ligature separated on the ninth day, the last on February 6, or ten days after the others. The drainage-tube was removed on the sixth day. The patient regained health and strength wonderfully quickly, and was discharged well on February 20 The speculum showed that the vagina terminated in a perfectly closed *cul-de-sac*. Contrary to what ordinarily happens, there was no disturbance to health on the approach of the menstrual period.

4146. *Caneva on a Proposed Operation for the Cure of Prolapsus Uteri.*—The patient is placed on the operating table in the supine position, with the nates raised. A metallic sound is to be introduced into the uterus, so that the body of the uterus may be held against the anterior wall of the abdomen. The operator, standing on the left of the patient, makes an incision in the linea alba 5 centimètres from the horizontal branch of the pubes, extending for 6 or 7 centimètres above the body of the uterus down to the peritoneum; with the handle of the bistoury or with the finger, he separates the peritoneum from the margins of the wound. The uterus being held in position by an assistant by means of the sound, the operator, with a fine needle and catgut unites the visceral to the parietal layer of the peritoneum. The abdominal wound is then closed; some points of suture including the peritoneum, and antiseptic dressing, are applied. Caneva does not consider the operation dangerous, and believes that the bladder would be only temporarily disturbed by the new state of things. He recommends this procedure in cases of grave prolapse, when pessaries are not well tolerated, and other methods of treatment have failed. Subsequent pregnancy, he thinks, would do no harm. G. D'ARCY ADAMS, M.D.

4147. *Duke on the Advantages of Abdominal Support during Pregnancy.*—In the *Brit. Med. Jour.*, March 1885, p. 482, Mr. A. Duke states that he advises patients, in a pregnant condition, to leave off their corsets (from about the fourth month onward), and, having supplied the want of corset by a suitable bodice, to wear a supporting abdominal belt with elastic sides, so as to exercise a comfortable pressure from below on the muscles, and fitted with tapes or straps, to relax the pressure as the uterus enlarges. When the patient is a primipara, the author directs the bandage to be left off at night, and the abdomen to be well rubbed over with fresh lard. When this treatment is followed out, there is little or no trace of the lineæ albicantes to be discovered after the patient recovers from the lying in.

RICHARD NEALE, M.D.

A SANITARY ASSOCIATION was established two years ago in Japan, and is now reported to number over 5,000 members.

DERMATOLOGY.

RECENT PAPERS.

4148. MORRIS, M.—A New Double-screw Excavator for Lupus Vulgaris. (*Lancet*, July, p. 141.)

4149. WHARTON.—Prickly Heat. (*Lancet*, August, p. 190.)

4150. Faradisation in Ringworm. (*New York Med. Jour.*, March 1.)

4151. SMITH.—The Treatment of Ringworm. (*Brit. Med. Jour.*, Nov., p. 854.)

4152. FOULIS.—The Treatment of Ringworm of the Scalp. (*Brit. Med. Jour.*, March, p. 536.)

4153. NEALE.—Irritation of the Scalp. (*Brit. Med. Jour.*, Nov., p. 1107.)

4154. SMYTH.—Irritation of the Head. (*Brit. Med. Jour.*, Nov., p. 1107.)

4155. FINNY.—A Case of Bilateral Herpes Zoster. (*Brit. Med. Jour.*, Jan., p. 67.)

4156. STOWERS.—The Treatment of Vascular Hypertrophy of the Nose. (*Brit. Med. Jour.*, Jan., p. 68.)

4157. HUTCHINSON.—A Case of Lupus Erythematosus. *Brit. Med. Jour.*, March, p. 535)

4158. BANCROFT.—Scleroderma in Relation to Filaria Sanguinis Hominis. (*Lancet*, Feb., p. 380.)

4159. BULAU.—A Case of Scleroderma successfully treated by Salicylate of Soda. (*Deutsche Med. Wochensch.*, Jan. 8.)

4160. RABITSCH.—The Treatment of Tinea Tonsurans with Salicylic Acid. (*Gazz. Med. di Torino*, Nov. 1884.)

4161. VIDAL.—On Psoriasis. (*Jour. de Méd. et Chir. Prat.*, and *Gazz. Med. Ital. Prov. Venete*, Nov. 22, 1884.)

4162. MESNET.—On Gonorrhœal Erythema. (*Paris Méd.*, Feb. 28.)

4163. WHITE.—Psoriasis and Verruca : Epithelioma a Sequence. (*Amer. Jour. of Med. Sciences*, January.)

ART. 4148. *Morris on a New Double-screw Excavator for Lupus Vulgaris.*—Mr. Malcolm Morris, in the *Lancet*, July 1884, p. 141, describes a new double-screw excavator for the complete destruction of disseminated patches of lupus vulgaris. To accomplish this end it is necessary, first, that the instrument should be somewhat larger than the tubercle, so that when inserted it may firmly grip the surrounding tissue; secondly, that it should possess many lacerating edges, whereby the nodule may be thoroughly ploughed up; and thirdly, that it should be capable of rapidly penetrating to the bottom of the nodule. The author has devised an instrument which complies with the above condition, and gives a drawing of the same. Messrs. Krohne and Sesemann are the makers. The scar produced by the operation is flat, pale, and satisfactory. The duration and pain of the operation are much lessened by this new invention.

4149. *Wharton on Prickly Heat.*—Mr. Wharton, in the *Lancet*, Aug. 1884, p. 190, reports the case of a medical man who, after passing the age of 30, suffered year by year continually increasing distress from 'prickly heat' as each summer came round. No treatment gave the slightest relief, until it occurred to Mr. Wharton that perhaps the light short-sleeved India gauze vests worn by the patient in summer had some share in causing his agony. Advice was accordingly given to wear throughout the summer the thickest long-sleeved vests made entirely of wool, such as he wore in the depth of winter. The result was the absolute cessation of his experience of 'prickly heat.' All last summer and up to the present date he has never felt a symptom of his old complaint.

4150. *Faradisation in Ringworm.*—In the *New York Med. Jour.*, March 1, 1884, a case is reported of ringworm of the forearm cured by this means. The positive pole was applied to the elbow, and the negative electrode was passed repeatedly over the seat of the disease. A second application was made two days afterwards, when nothing of the ringworm was left except desquamated skin.

4151. *Smith on the Treatment of Ringworm.*—In the *Brit. Med. Jour.*, Nov. 1884, p. 854, Mr. Alder Smith refers to Dr. Shoemaker's report on the use of oleates in the journal of Oct. 18, and to the use of oleate of mercury in the treatment of ringworm; but Mr. Smith states that he has not found much success from the use of oleate of copper. For the last few months the author has, however, been trying the use of chrysophanic acid dissolved in chloroform, in cases of recent ringworm. A solution of seven grains of the acid to an ounce of chloroform seems to answer best in these cases. The small patches of ringworm should be carefully marked out by cutting the hair very closely on them, and the chloroform-solution should be well pressed and dabbed into the places with a minute sponge-mop, for five minutes, two or three times a day, according to the amount of irritation produced. The sponge-mop should not be much larger than a big pea, and should be continually dipped into the chloroform bottle. The solution soon evaporates when pressed into the diseased spot, and leaves the yellow acid dry on the place. Care should be taken that no one inhales the vapour, and it is well to apply the remedy in a current of air, and not in a small room. The spots should be well washed every morning with hot water and soap, to remove any sebaceous matter or crusts, and the hair should be kept closely cut on them till the new hair appears, which is generally in about two or three months. The solution must be used till all the diseased stumps have come out.

4152. *Foulis on the Treatment of Ringworm of the Scalp.*—In the *Brit. Med. Jour.*, March 1885, p. 536, Dr. J. Foulis suggests a very simple and effectual method of treating ringworm of the scalp. The patient is made to bend forward over a basin; the face is well-protected by a towel, whilst spirit of turpentine is freely poured over the spots, and well rubbed into the scalp with the forefinger. Generally, in a few minutes, the patient calls out that the application 'is nipping.' Then the turpentine is known to have penetrated deeply. A piece of carbolic soap (10 per cent.) is next well rubbed into the parts which have been acted on by the turpentine, and warm water is freely applied to make this soap into a lather. The head is then well dried with a towel, and common tincture of iodine, in two or three coats, is now well painted over the affected parts, and allowed to dry. As soon as the hair is dry, some carbolic oil (1 in 20) is rubbed all through the hair to catch any stray spores. This treatment applied every morning, or twice a day in very bad cases, generally cures the worst cases in about a week. During the last five years, the author has used no other method. Oil of turpentine is a powerful solvent of iodine, and a solution of iodine in turpentine is a most powerful germicide, which quickly destroys the fungus of ringworm. [Erlach, in 1871, spoke highly of the value of turpentine; *vide Medical Digest*, sect. 22 : 4.—*Rep.*]

4153. *Neale on Irritation of the Scalp.*—Dr. Neale, in the *Brit. Med. Jour.*, Nov. 1884, p. 1107, records a peculiar case of irritation of the scalp. A lady suffered from excessive irritation of the scalp, for which she had been treated by numerous drugs, ordered by several medical advisers. After some trouble, an examination of the head was submitted to, and revealed numerous nits; on more careful examination, four or five pediculi were captured. The patient was highly indignant at the result of the examination, and thought it hard she should have endured so many weeks of misery, and have been obliged to come nearly 400 miles to have a pediculus captured in her head.

4154. *Smyth on Irritation of the Head.*—Dr. S. T. Smyth, in the *Brit. Med. Jour.*, November 1884, p. 1107, writes that he regards a case of irritation of the head, mentioned in the *Journal* of November 8, as one of gouty eczema. Warm alkaline lotions, such as 120 grains of bicarbonate of soda to a pint of water, should be constantly applied during the day, and an ointment, composed of 30 grains of bicarbonate of soda to an ounce of 'pure' vaseline, at night. In chronic cases, the unguentum hydrargyri nitratis dilutum, or the unguentum hydrargyri oxidi rubri, one part to three parts of vaseline, is very beneficial. Whisky, mixed with Vichy water, or any other water containing bicarbonate of soda, is the only stimulant that ought to be allowed. Every second or third day the head must be washed with coal-tar soap. The treatment in many cases requires variation, but steady perseverance must be enforced.

4155. *Finny on a Case of Bilateral Herpes Zoster.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 67, Dr. J. M. Finny records the case of a woman, aged 40, who consulted him on September 29, 1884, for what she feared was erysipelas of the neck and ear, and for a most severe headache which had lasted for four days. On inspection, it was found that the patient was suffering from herpes zoster on both sides of the neck and scalp. On the left side the erythematous patches followed the distribution of the descending sensory nerves of the cervical plexus, with the exception of the suprasternal division, and were limited to the upper part of the deltoid and pectoral muscles; a large patch occupied the posterior superior triangle of the neck, and one or two small ones were over the sterno-mastoid. On the right side, the ascending branches of the second and third cervical nerves were affected, with a large cluster in the anterior triangle of the neck. Another patch was on the lower jaw, and a third was situated near the mastoid bone. The whole of the external ear was red and swollen, and thickly studded with very minute vesicles. The scalp on the same side, as far as the mid-parietal region, was the seat of a number of pimples and vesicles, which followed closely the course of the greater and lesser occipital nerves. The author remarks on the rarity of bilateral herpes zoster, and adds that amongst the most rare positions of the body in which herpes is met with, are the occipital nerve and the nerves of the forearms and legs. [In the *Medical Digest*, sect. 54 : 2, several cases of bilateral herpes are noted.—*Rep.*]

4156. *Stowers on the Treatment of Vascular Hypertrophy of the Nose.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 68, Dr. J. H. Stowers recommends the adoption of a plan, which he describes as 'multiple punctiform scarification,' for the treatment of cases of acute rosaceous acne of the nose, and also in cases of simple passive congestion with enlargement, or fibro-cellular hypertrophy. An instrument has been devised, at the instigation of Dr. Sangster, whereby a number of minute double-edged steel blades can be included in one handle. The affected part is well fomented for some minutes, then rapidly punctured with the instrument. It is often necessary to make from 500 to 3,000 punctures at each sitting, and to repeat the operation about once a week, or once a fortnight, for a period of some months. All the treatment necessary between the operations is to keep the surface smeared with vaseline, and to protect it from the air.

4157. *Hutchinson on the Cure of Lupus Erythematosus.*—In the *Brit. Med. Jour.*, March 1885, p. 535, Mr. Jonathan Hutchinson narrates a case in which a gentleman was completely cured of lupus erythematosus by persistently taking five drops of liquor arsenicalis, three times a day, for two years. In March 1883 the patient suffered from several patches on the face and scalp. In February 1885 the lupus was quite well. There were left only thin white scars, without any erythema or thickening at their edges. On the sides of the nose these scars were each as large as a shilling, that on the middle of the nose not so big. On the scalp, which was nearly bald, there were several scars as large as the end of one's thumb. The patient took arsenic regularly for fifteen months; he then had a sharp attack of shingles, and left the medicine off for a little time. No local remedy was applied to the patches on the nose whilst the arsenic was being taken, though a hair-wash had been sometimes used for the head. Mr. Hutchinson considers that the cure was entirely due to the arsenic, and suggests that a more careful administration of this drug should be tried in these cases, which are often only partially cured.

4158. *Bancroft on Scleroderma in Relation to Filaria Sanguinis Hominis.*—In the *Lancet*, Feb. 1885, p. 380, Dr. J. Bancroft records a case of scleroderma in a girl, aged 17, together with filaria in the blood. The girl was born in Queensland, and had always lived in the colony; she always enjoyed good health, but occasionally shivered. The skin of the face, arms, shoulders, and all over the body above the waist, was thickened and hard; it could not be pinched up, and felt like salted ham; below the waist the skin was softer, and was normal over the legs. Dr. Bancroft found filariæ in the blood on May 4, 1883. In June the patient suffered from an attack of mild peritonitis, during which time no filariæ could be found in the blood, but later on in the year they appeared again. The author quotes the opinion of Rasmussen, who states that scleroderma is of elephantoid nature, but most observers say very little upon this disease. It is suggested that further inquiries into the nature of this complaint should be made by Drs. Manson and Lewis, and by practitioners in Brazil.

RICHARD NEALE, M.D.

4159. *Bulau on Scleroderma treated by Salicylate of Soda.*—At the sitting of the Medical Society of Hamburg, on May 13, 1884 (*Deutsche Med. Wochensch.*, Jan. 8), Dr. Bulau described a case of scleroderma affecting a young girl, aged 22. The most noticeable feature at first sight was the stiff, almost smiling, expression of the face, where the skin was smooth, tight, and not to be raised up from the subcutaneous tissue. The eyelids could not be quite raised, and the mouth could be opened only far enough to allow the projection of the tip of the tongue. Stiffness of the skin of the neck embarrassed the movements of the head; the arms could hardly be raised to a horizontal position on account of the unyielding condition of the axillary skin; while the elbows were bent at an obtuse angle, and the fingers and wrist could not be moved. The lower extremities were the least affected. Cod-liver oil was given, and mercurial ointment rubbed in, but great pain in the joints seemed to point to a rheumatic origin, and salicylate of soda was tried, in doses of 4 grammes (62 grains) a day. Improvement immediately set in; at the end of a fortnight the skin of the face felt softer, and matters progressed until at last, in a few months, the axillary folds, which held out the longest, became supple again, and the arms could be freely moved. The patient took salicylate of soda regularly for nine months, and no relapse had occurred up to the date of reporting.

ALICE KER, M.D.

4160. *Rabitsch on the Treatment of Tinea Tonsurans by Salicylic Acid.*—In one case, painting daily for three days with an alcoholic solution of salicylic acid, 10 per cent., cured patches of eczema marginatum which had lasted for more than twenty years. In another case, in a patient of sixty, the patches of tinea tonsurans existed on the forehead, scalp, ears, and nape of neck. On the back, legs, arms, and hands there were patches varying in size from that of a florin to a five-shilling piece. The scalp was soaked in glycerine, and afterwards the head and whole body washed with soft soap. The patches were then painted with salicylic solution. Fifteen days sufficed to cure the disease, and there was no recurrence. The author has lately used this remedy with success in pityriasis versicolor. The parts affected are first bathed with green soap and alcohol (2 to 1), and then sponged with the alcoholic solution of salicylic acid of 10 per cent. Cure results in a few days.

4161. *Vidal on Psoriasis.*—Psoriasis of the scalp may be easily confounded with eczema, especially when in the isolated state. There are, however, many important distinctions. Psoriasis is composed of dense stratified crusts, their greatest thickness being in the centre; moreover, the eruption is absolutely dry, while eczema is preceded by a period of more or less abundant exudation; and lastly (and on this characteristic, the author especially insists), when the crust of psoriasis is carefully examined, one sees that the hairs pass through it perpendicularly, while in eczema the hairs are matted under the crust, causing it to adhere and binding it together. Psoriasis, too, does not cause alopecia, while eczema does; psoriasis, when it extends to the forehead, presents a clean and well-defined border, while in eczema the margin is diffused and badly defined. Psoriasis, circumscribed to the face, sometimes greatly resembles a syphilitic eruption, but this especially occurs in psoriasis of the palm. True psoriasis very rarely attacks at the same time the hands and feet, while this coincidence is frequent in syphilis. Psoriasis may be met with on the prepuce and glans penis; and these two may be easily confounded with syphilitic papules. Its occurrence on the glans is remarkable, as showing that the integument of the glans must be considered as belonging to the skin and not to the mucous membrane, since psoriasis of mucous membrane does not exist. It is only by an error that the term psoriasis is used to designate this particular affection of the tongue which often terminates in epithelioma.

The coincidence of psoriasis of the skin with psoriasis of the tongue is extremely rare, and shows that these two affections are not related. Vidal has, however, seen psoriasis of the vulva and of the anus, but the disease was arrested at the margin of the mucous membrane. In the nails, psoriasis determines particular alterations often analogous to those caused by eczema. It is admitted generally, as a distinction, that psoriasis causes transverse striæ, while eczema determines longitudinal channeling of the nails; but this distinction is not absolute. Certain forms of lupus, lupus erythematosus especially, sometimes greatly resemble psoriasis of the face. Heredity plays an important, but not a constant, part in the production of psoriasis. In treatment, the author considers arsenic the only useful drug, and this only of service in the fully developed disease, and in large doses. In these doses, it causes gastric disturbance and deterioration of the organism generally, and hence its power of influencing favourably the disease. Psoriasis frequently occurs in vigorous and well-constituted persons. When the patient is lowered by any intercurrent disease, the psoriasis disappears, reappearing when the patient regains health and strength. The arsenic is best given in solution: distilled water, 300 grammes: arseniate of soda, 10 centigrammes. One tablespoonful of this solution contains 5 milligrammes of the arseniate of soda, and the dose may be increased gradually to 4 tablespoonfuls a day. The local treatment is also considered.

G. D'Arcy Adams, M.D.

4162. *Mesnet on Gonorrhœal Erythema.*—The author has described in his inaugural dissertation (*Paris Méd.*, Feb. 28, 1885, p. 102) various forms of erythema which are observed in patients suffering from gonorrhœa. These eruptions are polymorphous, and are generally accompanied by fever and other symptoms of infection. M. Mesnet thinks that many eruptions ascribed to cubebs and copaiba are really due to gonorrhœa itself.

J. S. Keser, M.D.

4163. *White on Psoriasis and Verruca; Epithelioma a Sequence.*—Dr. James C. White, of Boston, in the January number of the *American Journal of the Medical Sciences*, presents brief notes of two remarkable cases of disease. There were three distinct pathological affections of the cutaneous tissues, psoriasis, verrucous hypertrophy, and epitheliomatous new growth, not occurring independently of each other, but as successive mutual transformations in the above order. The three dermatoses which enter into the clinical history of Dr. White's case, and which are in their nature apparently as unlike as their companionship is rare, have a close affiliation in their anatomical relations. The transformation of patches of psoriasis into horny or warty permanent growth is not referred to in most works on dermatology as even of possible occurrence; the transformation of verrucous growths into epithelioma is not very unfrequent; but the uninterrupted sequence followed, in this case, psoriasis, verruca, epithelioma, or, in other words, psoriasis as a cause of carcinoma, is extremely rare or unparalleled in dermatological history. The practical lesson to be deduced is that the transformation of patches of psoriasis into verrucous hypertrophy must be regarded as an ominous occurrence, and that the softening or other change of such horny growths demands thorough excision without delay.

ANATOMY.

RECENT PAPERS.

4164. Lavdovsky, M. D.—On Juice of Bilberries as a Colouring Substance for Histological Specimens. (*Russkaia Meditzina*, 1884, No. 21, p. 471.)

4165. Marchi.—The Minute Anatomy of the Corpora Striata. (*Riv. Sper. di Fren.*, Fasc. ii. and iii., 1883.)

4166. Marchi.—The Structure of the Optic Thalamus. (*Riv. Sper. di Fren.*, Fasc. 3, 1884.)

4167. Bitot.—The Seat and Direction of those Capsular Radiations which have the Function of Transmitting Language. (*Archives de Neurologie*, July and September 1884.)

4168. Pellacani.—The Structure of the Spermatic Cord. (*Archiv für microscop. Anat.*, Band xxiii., Heft 3.)

4169. Dohrn.—A Married Hermaphrodite. (*Archiv für Gynäkologie*, Band xxii., Heft 2, p. 225.)

4170. Janosik.—Histological and Embryological Observations on the Genito-urinary System. (*Mittheilungen der Kaiserl. Akademie der Wissensch. in Wien.*, No. iv., 1885.)

4171. Lachi.—Membrana Granulosa Ovarii. (*Lo Sperimentale*, May 1884.)

4172. Bourceret.—The Venous Circulation in the Foot. (*Gaz. Hebdom.*, Feb. 13.)

Art. 4164. *Lavdovsky on Juice of Bilberries as a Stain for Histological Preparations.*—Professor M. D. Lavdovsky, of St. Petersburg, proposes (*Russkaia Meditzina*, 1884, No. 21), as a staining agent for histological specimens, juice of bilberries (*Vaccinium Myrtillus*) prepared in the following manner. Fresh ripe berries are triturated with a double quantity of distilled water, to which is added some spirit of wine (half an ounce of the latter to one pound of water). The mixture is twice or three times boiled in a water bath, and then filtered when still hot. After cooling, it is ready for use. Juice of bilberries gives two colouring modifications, a red and a blue one. When used as it is, it colours tissues exactly like carmine. Under the influence of 1 per cent. solution of sugar of lead or burnt alum, the red stain is at once transformed into a blue, which is very like hæmatoxylin. Bilberry red is not stable in glycerine preparations, but may be made so, if the specimens be treated with absolute alcohol and mounted in Canada balsam. Bilberry blue remains unchanged for years. The juice of bilberries stains best and most rapidly all specimens hardened in Müller's fluid and chromates. Fresh tissues are stained but gradually. It intensely colours the nuclei of red and white blood-corpuscles, and of connective tissue, and the fibres of the latter, the nuclei (and slightly, also, the interstitial substance) of cartilage, the nuclei (and slightly the substance itself) of muscles, the nuclei (and slightly the myeline sheath) of nerves, the Malpighian layer of the skin, and so on. Bilberry blue stains cellulose of vegetable cells of a beautiful blue colour.

V. Idelson, M.D.

4165. *Marchi on the Minute Anatomy of the Corpora Striata.*—Dr. Marchi's researches were carried out under the direction of Professor Golgi, on the brains of the calf, the rabbit, the dog, and the cat. The grey substance of the corpora striata is composed of nerve-cells, fibres, and neuroglia. The nerve-cells are of two kinds: small, measuring from 8 to 10 μ; and large, measuring from 18 to 20 μ. The small ones are most abundant. The most important circumstance, however, is that the nervous prolongation from some cells, though it gives off a few fine filaments in its course, becomes directly continuous with the axis-cylinder of a nerve-fibre; while the nervous prolongation from other cells at a little distance from its origin divides into two or three branches, which in their turn subdivide dichotomously, and so on to the third, fourth, or fifth degree. Of these two different modes of behaviour, the minute subdivision of the nervous prolongation is the most prevalent, and it is found equally in the small and in the large cells. The nerve-fibres have a twofold mode of origin to correspond. There does not appear to be any histological difference between the caudate nucleus and the lenticular nucleus, which are continuous with each other in front. Do the facts mentioned in regard to structure afford any ground for guessing at function? Professor Golgi found in the posterior grey columns of the cord that the nervous prolongation went in its entirety to form a complicated interlacement from which the nerves took origin; while in the anterior grey columns the nervous prolongation went direct into the nerve. From this he inferred that the one arrangement was subserveint to sensation, the other to motion. If this inference be correct, the corpora striata cannot be considered as exclusively organs either of motion or of sensation. Dr. Marchi holds that his results warrant the assertion that in the corpora striata, as in other parts of the central nervous system (Golgi), the specific function, whatever may be the nature of it, must be effected, not by an isolated and individual action of each ganglionic element, but by the joint action of extended groups of cells. The sections were stained with nitrate of silver. The process was as follows. Small pieces of the fresh tissue are eft for seven or eight days in a 2 per cent. solution of potassium bichromate. They are then transferred to a mixture of eight parts of the bichromate solution and two parts of a 1 per cent. solution of osmic acid. At the end of about twenty-four hours they are taken out, and put at once into a ·6 per cent. solution of nitrate of silver. A precipitate takes place, and for this reason the solution must be renewed. The tissues may remain an indeterminate time in the silver solution. After twenty-four hours sections may be cut, and so on for two or three days. In order to trace the nervous prolongations, the sections should be cut thick. To secure transparency under these circumstances the sections are treated with creasote, after a preliminary soaking in alcohol. They are then at once well washed with turpentine, and forthwith are ready for mounting.

4166. *Marchi on the Structure of the Thalamus Opticus.*—The account of the optic thalamus given by Dr. Marchi presents but few points to distinguish it from the description of the striate bodies, summarised in the previous article. There are, as before, two sizes of cells. The large cells here, however, vary from 40 to 60 μ, the small from 20 to 30 μ. Of the two ways in which the nervous prolongation behaves itself, according to Professor Golgi (London Medical Record, October 1884), the author finds both present; though the most prevalent is that in which the nervous prolongation runs direct into the axis-cylinder of a nerve-fibre, giving off in its course some fine filaments. The author concludes, therefore, that the optic thalami are chiefly, but not exclusively, motor in function. In addition to the details of preparation already given Dr. Marchi thinks it important to inject through the carotid a 2 per cent. solution of bichromate of potash before the removal of the brain.

William R. Huggard, M.D.

4167. *Bitot on the Seat and Direction of those Capsular Radiations which have the Function of Transmitting Language.*—Bitot (*Archives de Neurologie*, Paris, July and September 1884) endeavours to prove that Broca's convolution is not the centre of articulate language, but that this latter is situated in that portion of the centrum ovale which he calls 'extranuclear frontal capsular strands,' or the active portion of the centrum ovale. This portion of the brain is nourished by branches of Charcot's 'cerebral-hæmorrhage-artery,' which itself springs from the middle cerebral. The anterior cerebral artery also gives blood, if not invariably, at least frequently, to these same strands. The special arteries of these latter Bitot proposes to call 'arteries of language or aphasia,' and suggests that central hæmorrhage limited to the arterial branch will give rise to ordinary hemiplegia and embarrassed speech; while hæmorrhage limited to the branches of the extranuclear capsular strands will cause absolute loss of language and a slight paralysis. He comes to the conclusion that the right third frontal convolution has the same functions as the left, and that these functions are owing, not to the cells of their cortical matter, but to extranuclear frontal capsular radiations. The cortex of the third left frontal convolution is, therefore, according to him, not the centre of language, and its cells may disappear without interfering with this function. Magnan had already some years ago objected to the theory that Broca's convolution was the psychical centre of language, and endeavoured to show that ideation or the faculty of language belongs to the entire extent of the cerebral cortex. Charcot has coincided in this opinion; and Bitot thinks that, if there is a motor cortical centre for language, which he considers highly probable, this cannot be situated in Broca's convolution, but must be found in the middle portion of the orbital convolutions, in a space of five square millimètres, and two centimètres outwards from the median line.

Julius Althaus, M.D.

4168. *Pellacani on the Structure of the Spermatic Cord.*—The author, pursuing practical investigations under the superintendence of Waldeyer, confirms the received theory that the cremasteric fascia forms a distinct outer covering for the spermatic cord. This fascia is most dense on the anterior and lateral aspects of the cord, and includes many elastic fibres; it grows thinner towards the scrotum. At the external abdominal ring it is partially blended with the intercolumnar fascia. The cord proper is made up of what the author terms a vascular group or portion, and a deferens portion. The former includes the spermatic artery and venous plexus, lymphatic vessels, and the nerves of the spermatic plexus; the latter, the vas deferens and its blood-vessels. Both groups are invested with plain muscular fibre, the cremaster internus of Henle. The deferens portion has a lateral position at first, but, as the vas passes lower downwards, it lies more posteriorly and inwards. The vascular portion, in its course from the inguinal canal to the testis, resolves itself into three elements; first, the group of vessels supplying the testicle, the veins of which are more numerous and thicker the nearer they lie to the testis; secondly, the vessels of the epididymis; and lastly, a series of plain muscular fibres that collect and become denser towards the posterior wall of the testicle; to these must be added the paradidymis and its appendages. The vessels of the epididymis lie posterior and external to the vessels supplying the body of the testicle. The paradidymis lies, superiorly, posterior to the other structures in the vascular portion of the cord; lower down, it lies between the vessels of the testicle and those of the epididymis. The lymphatic vessels lie entirely on the periphery of this group of vascular structures, on its hind or outer aspect. The plain muscular fibres run downwards to blend with the tunica vaginalis. In the neighbourhood of the vas deferens is a separate bundle of organic muscular fibres. The cremaster internus increases greatly at puberty, especially in and around the structures forming the vascular portion of the cord; the bundles of muscular fibres here blend with the longitudinal fibres of the muscular tunic of the vessels, so that this portion of the cord looks like the wall of a large vein with a highly developed longitudinal series of fibres arranged in small, distinct bundles. There is a similar investment developed round the deferens portion of the cord. In old age, the fat in the connective tissue of the cord increases, the cremaster internus degenerates, and the veins becomes dilated. This connective tissue of the cord is denser, at all ages, in some parts of the cord than in others; it is particularly dense over the plain fibres of the cremaster internus where, as described above, it closely invests the vessels. Thus the connective tissue here forms a common tunica adventitia for the entire vascular portion, just as the cremaster internus constitutes a common muscular coat. According to Pellacani, the closure of the funicular portion of the processus vaginalis of the peritoneum is effected by the formation of granulations and their subsequent atrophy. The author has found that the canal of the vas deferens is spiral, so that the lumen of the vas is found, on section, to be excentric in parts, but perfectly central in others.

4169. *Dohrn on an Adult Hermaphrodite.*—Dr. Dohrn describes the case of a hermaphrodite, aged 31, who had been christened and brought up as a girl, and married for six years; but, on examination, it was found that he was evidently a male. The patient had never menstruated before marriage, and had little or no sexual desire, and what existed was not directed to either sex in particular. After marriage he suffered from irregular hæmorrhage from the pudenda, sometimes lasting for several weeks, sometimes for only a day. Coitus was always painful, the pain radiating from the genitals to the hypogastrium. Dr. Dohrn found the patient to be of medium height, with the physiognomy and voice of a woman; the hair was long, but there was no beard. The muscles were well developed; there was much fat on the shoulders and nates, and the mammæ were larger than in an ordinary man, smaller than in most women. The measurement between the anterior superior iliac spines was 28·1 centimètres; the widest span of the iliac crests 30·2 centimètres; the conjugata externa 18·8 centimètres. The pubic arch formed an acute angle as in the male, the inclination of the pelvis was as in woman. The external organs were covered with hair only towards the pubes and anus, being hairless in the middle. Two large labia externa, the right being much the larger, extended from the mons to the perinæum; their integument was deeply pigmented. Posteriorly they did not form a commissure, but were separated from each other by a loose tract of integument that stretched from the anus to the genitals. In the posterior portion of each labium a body of the size of a pigeon's egg, resembling a testicle and epididymis, could be felt; and Dr. Dohrn could detect the vas deferens, passing upwards into the external abdominal ring. The labia minora were well developed, covered entirely by mucous membrane, and formed anteriorly an ample prepuce to an organ resembling an infant's penis, bearing at the extremity of its glans a shallow depression, which was continued backwards as a shallow groove. On separating the lesser labia, the groove was found to run to the meatus urinarius, and bore five shallow depressions. The meatus, which lay 3 centimètres behind the clitoris, was exceedingly wide, allowing the introduction of the finger into the bladder with facility; from its margin three polypoid vascular growths hung downward. On the posterior border of the urethral orifice were three canals; a very fine bristle could be passed for the length of one centimètre up that which lay most to the right, but only half that distance up the other two. There was no trace of any vagina. On rectal examination, neither uterus, tubes, ovaries, nor prostate could be detected. Dr. Dohrn believed that the two outer canals on the margin of the urethra were the ejaculatory ducts, the middle canal being the vesicula prostatica. There was evidence of occasional emissions; the urethral orifice had served for a vagina, and the irregular hæmorrhage was traced to the vascular growths. The malformation appeared due to imperfect closure of the outer parts, including the urethra and scrotum. It was an extreme case of hypospadias.

4170. *Janosik on the Genito-urinary Tract.*—Dr. Janosik, of the Czech University, Prague, has recently undertaken a thorough investigation of the development of the genito-urinary organs. The Wolffian duct is developed in the mesoblast as a solid cord, which becomes hollow. Some rudimentary tubules with external glomeruli spring from its anterior extremity. In the Wolffian body only one kind of tubule exists, and that is an offshoot of the pleuro-peritoneal epithelium, direct in the anterior, and indirect in the posterior portion of the body. In the latter segment some of the tubules arise from the Wolffian duct, as does the ureter, whence, in turn, spring the tubuli uriniferi, through a process of repeated subdivision. The glomeruli are developed in the same manner, both in the primitive and in the permanent kidney. A blood-vessel forms a loop around the site of the glomerulus. The duct of Müller is developed anteriorly as an involution of the peritoneal epithelium; posteriorly, it first appears as a solid cord lying between that epithelium and the Wolffian duct. In the course of development of the genital gland, chains of cells grow into it, springing from the germinal epithelium. From these arise, in the male, the tubuli seminiferi and the rete testis, and, in the female, the solid, and also, in part, the hollow chains of cells in the hilum. [Balfour and Foulis have shown the fallacy of speaking of 'cords' or 'tubes' of ova in the parenchyma of the fœtal ovary. The greater part at least of the true tubes in the hilum are simply prolongations of the Wolffian tubules. The remainder, to which Dr. Janosik refers, are simply columns of ova that have sunk, deeper than others, into the tissue of the hilum.—*Rep.*] Dr. Janosik speaks of a secondary process of ingrowth from the germinal epithelium, which is only represented in the testis by the formation of rudimentary follicles, but in the ovary this process gives rise to Pflüger's tubes (*vide supra*). From these tubes arise the ova with the membrana granulosa, or epithelium of the Graafian follicles. [Foulis alone contends that this epithelium is derived from the stroma of the ovary, and therefore not from the same source as the ovum.—*Rep.*] Hence there is no complete homology between seminal cell and ovum, excepting that they have a common origin from the cells of the germinal epithelium. The tubes of the epididymis are formed from those belonging to the Wolffian body, and afterwards become connected with the tubuli seminiferi. In the same way, the parovarium is developed.

ALBAN DORAN.

4171. *Lachi on the Membrana Granulosa.*—The researches upon which this paper was based were made by microscopical examination of sections of the ovaries of cows and calves. It was found that the cells of the granulosa presented the most varied forms, out of which three types could be distinguished. Firstly, Dr. Lachi observed cells with well-marked filamentous processes, resembling those described by Retzius as constituting the epithelium of the organ of hearing in many fishes (*Stützzellen*). Their nuclei were excentric. Secondly, there were cells with central protoplasm and few processes. The third type bore all the characters of large lymphoid cells. The first variety appeared to form, with their long and numerous processes, a kind of network, in the interstices of which the other cells were crowded. The precise relation of these cells to the ovum was very hard to determine, especially in the riper follicles; yet they all appeared to be in close contact, the processes from the first type of cells touching the membrana limitans.

G. D'ARCY ADAMS, M.D.

4172. *Bourceret on the Venous Circulation in the Foot.*—The author has employed in his researches (*Gaz. Hebdom.*, Feb. 13, 1885, p. 111) a method of injection by which the fluid is pushed into the finest subdivisions of the veins, and this new process has enabled him to discover some new and interesting facts. It appears, for example, that the veins are more numerous on the plantar than on the dorsal aspect of the foot. Immediately under the corium of the sole there is a very dense network of veins measuring from half a millimètre to two millimètres in diameter. They are placed so close together that it is nearly impossible to dissect them.

J. S. KESER, M.D.

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

4173. DALY.—Some Questions Relating to Tonsillotomy. (*New York Med. Record*, Feb. 1883.)

4174. DALY.—Clinical Remarks upon Deflection of the Nasal Septum. (*Med. and Surgical Reporter*, Dec. 15, 1883.)

4175. LOEWENBERG.—On Ozæna. (*Deutsche Med. Wochensch.*, Jan. 1 and 8.)

4176. JURASZ.—Serous Perichondritis of the Nasal Septum. (*Deutsche Med. Wochensch.*, Dec. 11.)

4177. HUTCHINSON.—Perforating Ulcers of the Septum Nasi. (*Med. Times and Gaz.*, July, pp. 6 and 42.)

4178. RICHARDSON.—Treatment of Nasal Polypus by Sodium Ethylate. (*Asclepiad*, July, p. 251.)

4179. ATKINSON.—Follicular Tonsillitis. (*Practitioner*, Sept. 1884, p. 198.)

4180 HOLMES.—A Case of Extirpation of the Larynx. (*Brit. Med. Jour.*, October, p. 809.)

4181. MORGAN.—On Clearing Tracheotomy-Tubes. (*Lancet*, November, p. 809.)

4182. PARKER.—On Sucking Tracheotomy-Tubes in Cases of Diphtheria. (*Brit. Med. Jour.*, November, p. 857.)

4183. BARRACLOUGH,—On Aspiration for Removing Exudations from the Trachea after Tracheotomy. (*Lancet*, December, p. 1077.)

4184. SHADWELL.—An Instrument for the Removal of False Membrane after Tracheotomy. (*Lancet*, March, p. 541.)

4185. RICHARDSON.—The Uses of a Common Paraffin Taper. (*Asclepiad*, Jan., p. 63.)

4186. ROURA.—Action of the Larvæ of a Tropical Dipterous Insect on the Nasal Cavities. (*Gaceta de Sanidad Militar*, and *Revista de Medicina y Cirujia Practicas*, Nov. 22.)

4187. KAZANSKY, A. J.—On a Case of Tuberculosis of the Fauces and Pharynx. (*Meditz. Pribavl. k' Morsk. Sborn.*, December 1887, pp. 56-67.)

4188. BELL.—A New Method of Removing Nasal Polypus. (*Canada Medical Record*, Feb. 19, 1884.)

ART. 4173. *Daly on Tonsillotomy.*—Dr. Daly, discussing some questions regarding this operation (*New York Med. Record*, Feb. 1883), rejects the use of caustics and the galvanic cautery, and gives decided preference to the cutting operation, using Morell Mackenzie's modification of Physick's tonsillotome, the gland being pressed inwards by an assistant. The hilt of the instrument is grasped in the left hand and with 'the index finger of the right hand, the right tonsil of the patient is sought and surrounded by the fenestrum. Then the knife is with the thumb of either hand pushed quickly home.' The author operates with the left hand first, leaving the right hand to operate with rapidity in case of any unruly behaviour on the part of the patient. When the tonsils are too large to be easily removed by the guillotine, or when they are like a narrow flap projecting into the throat, the author uses laterally curved probe-pointed knives fitted in long slender handles, the part to be removed being seized by vulsellum forceps. The author arrests hæmorrhage by torsion or galvanic cautery. Regarding the recurrence of enlargement of the tonsils, the author considers that, with every badly treated or neglected cold affecting the throat, there will be some tendency for them to increase again; but the tendency is not by any means marked, and may be prevented altogether with ordinary care and proper treatment by local applications.

4174. *Daly on Deflection of the Septum Nasi treated by Operation.*—Dr. Daly relates two cases of this character. The first is that of a young lady suffering from deflection of the septum towards the left, the result of a fall in childhood. The dorsum nasi was depressed, the mesial line carried considerably to the right. There was also intractable auropharyngeal catarrh, with loss of hearing, anosmia, and complete stenosis of the left nostril. On the apex of the convexity, there was a mass of cartilaginous tissue which pressed the ala nasi outward. The deflection appears to have been limited to the cartilaginous septum, though this is not distinctly stated. After a preliminary operation, three weeks before, to remove the cartilaginous mass from the convex surface and reduce the septum to its proper thickness, numerous stellate incisions were made into the septum, under an anæsthetic, with an instrument not described, and the septum was forced over into its place by means of the finger, introduced into the left nostril. Ivory plugs were inserted. Considerable constitutional disturbance followed, and on the third day there was a 'slight erysipelatous blush' upon the nose [of reflex character?—*Rep.*]. Spencer Watson's instrument was used to rectify the external deformity. The result was that the external appearance of the organ became excellent, the left nostril freely pervious, and that the sense of smell began to return. The second case, occurring in a lad, was operated on in a similar manner. Severe ulceration, however, necessitated the substitution of soft rubber tubing for the hard ivory plugs. The occluded nasal passage became clear; but for ten days the boy was very ill from a severe attack of quinsy, 'partly as a result of the operation, and partly from catching cold.' [These cases, whilst giving successful local results, show that operations on the septum are not free from risk, and lead us to endorse the author's opinion that, in carrying them out, hospital care and attention should be resorted to whenever practicable.—*Rep.*]

E. Cresswell Baber, M.B.

4175. *Loewenberg on Ozæna.*—In the *Deutsche Med. Wochensch.* for Jan. 1 and 8, Dr. Loewenberg, of Paris, gives a summary of his views on the nature and treatment of ozæna. He diagnoses it by the inspection of the nasal cavities anteriorly and posteriorly, and by the microscopic examination of the secretion. The chief characteristic disclosed by inspection is the atrophy of the mucous membrane of the turbinated bones, causing an increased width of the nasal cavities, no ulcerative process being concerned in the production of the affection. Peculiar micrococci are found in the secretion, always large in size, and with a tendency to form into chains, and to exist in pairs; but in the unmixed secretion Dr. Loewenberg has never found any other kind of organism, except in one case of a child, aged 8, where bacilli were constantly present. The secretion was alkaline in all cases except the one just mentioned, where it was neutral. Dr. Loewenberg believes that ozæna can proceed only from an already existing case, when the germs given off meet with a suitable field in which to multiply, and the rarity of the affection shows the necessity for some form of predisposition. The general poor health of persons suffering from ozæna is referred to the effects of breathing constantly the air poisoned by the foul secretion, and of swallowing the secretion itself. Dr. Loewenberg points out the rarity with which aural complications arise in ozæna, peculiarly interesting in presence of the fact that the opening of the Eustachian tube is specially exposed in consequence of the atrophy of the turbinated bones. He prefers the name 'ozæna' to the longer and really incorrect one of 'rhinitis chronica atrophica fœtida,' contending that it describes the affection beyond possibility of confusion, and that ordinary ozæna may be distinguished from syphilitic by the designation 'simple' in contradistinction to 'true.' The forms of treatment which he recommends are the nasal douche and the nasal bath, both consisting of a very weak solution, 1 in 1,000 to 1 in 700, of corrosive sublimate, the douche being administered carefully and gently with a syringe, and the bath serving to supplement the douche for the upper part of the cavities. As a more permanent disinfectant, some antiseptic powder, such as boracic acid, should be blown into the nostrils, care being taken during its aspiration, as also during the douche and bath, to close the larynx against its entrance by saying 'ah,' or by breathing through the mouth. The results of even this treatment may, however, only be palliative if the disease have made much progress before coming under treatment.

4176. *Jurasz on Serous Perichondritis of the Nasal Septum.*—Professor Jurasz, of Heidelberg, communicates to the *Deutsche Med. Wochensch.* of Dec. 11 a case of serous perichondritis of the nasal septum. The patient was a girl, aged 10, who had suffered eight days previously from erysipelas of the nose and face, closing the eyes and causing stoppage of the nostrils, which latter symptom persisted after the cure of the erysipelas. Sleep was disturbed by asthmatic attacks, and the child was languid and pale, with little appetite. Each nostril was filled up by a hemispherical intensely red tumour, visible without the aid of the nasal speculum; fluctuation was distinctly marked, and the tumours rested with a broad base on the cartilage. Professor Jurasz diagnosed purulent perichondritis, but, when the swellings were aspirated a few days later, 5 cubic centimètres of a clear serous fluid, mixed with blood towards the last, were evacuated, unfortunately without being able to be further examined, as the vessel in which it was collected was overturned. The patient could immediately, although still with some difficulty, breathe through the nose, which had not been possible before. A sound, introduced through the aspiration opening, demonstrated that the cartilage was laid bare over the whole extent of the tumour, the fluid having formed between the cartilage and perichondrium, and that a perforation existed in the septum, the edges of which felt soft and fibrous. Fourteen days afterwards the right nostril was completely clear, the mucous membrane and the perichondrium adhering firmly to the cartilage; and, although a small swelling was still visible in the left nostril, it caused no embarrassment of respiration, and had disappeared in another fortnight. The affection is an extremely rare one, only one case, described by Velpeau, having been found recorded. Professor Jurasz considers the previous erysipelas to be sufficient justification for considering the affection to be an inflammation, and he compares it to the serous periostitis described by Poncet, Albert, and Terrier, under the name of periostitis albuminosa. He concludes by hoping that cases subsequently to be observed will throw more light on the subject.

Alice Ker, M.D.

4177. *Hutchinson on Perforating Ulcers of the Septum Nasi.*—Mr. Jonathan Hutchinson, in the *Med. Times and Gaz.*, July 1884, p. 6 and 42, states that there is a general belief that perforating ulcers of the septum of the nose imply syphilis, whereas he feels sure this inference is often incorrect, and that there is a form of chronic ulceration which often results in perforation of the cartilaginous part of the septum, the causes of which are very obscure. Twelve cases are cited; one, a very typical example of the affection, occurred in a lady about 44 years of age, apparently in good health and not the subject of any special diathesis. In this case, there was a hole through the septum nasi which admitted the tip of the little finger; it was just within the nostril (the usual place in these cases) and every part of it was easily in view. The posterior and lower part of its edge presented an ulcerated surface, and some small granulations. All the rest of the edge of the hole was quite soundly healed, but there was not much swelling about it. Iodide of potassium and nitric acid were tried, but still the ulcer spread. The history of the case was that for two years the patient had noticed a scab inside the nose, causing neither pain nor irritation; this went on until a scab formed on both sides; then perforation occurred, and the ulcer spread rapidly. Nothing definite was made out by microscopic examination of a piece of the ulcerated edge, nor was there any evidence of struma or lupus in this case. Mr. Hutchinson did not think it was a rodent ulcer, though he feared it at one time. In cases where there is a clear history of syphilitic antecedents, if the ulceration be slow and without tendency to diffuse inflammation or to exfoliation of bone, it will usually be found that internal treatment by specifics does little good, whilst local treatment will cure. The best local treatment is the repeated careful application of the acid nitrate of mercury, and the use of the yellow oxide ointment. The younger the patient, the more likely do these ulcers tend to have a relationship to lupus; but they are more common after middle age, and then, in not a few cases, it is impossible to assert anything with confidence as regards their cause.

4178. *Richardson on Treatment of Nasal Polypus by Sodium Ethylate.*—In the *Asclepiad*, July 1884, p. 251, Dr. Richardson notes a method of treating nasal polypi by sodium ethylate. The operator uses a long and slightly curved pair of steel forceps, the ends of which come to a fine point. He takes a piece of soft cotton-wool, places it between the points of the forceps, and makes the end like a bougie. The cotton-probe is then saturated with the sodium ethylate, and the polypus, being brought down by the patient sharply blowing his nose, is touched with the sodium ethylate for about three minutes. On removing the cotton, it commonly happens that the patient can expel the whole mass of destroyed polypus, in a semi-fluid form, by blowing the nose. The ethylate is afterwards applied to the base of the polypus, and the growth thus destroyed.

4179. *Atkinson on Follicular Tonsillitis.*—Dr. Atkinson, in the *Practitioner*, Sept. 1884, p. 198, makes a few remarks on the subject of follicular tonsillitis. As to the cause of this disease two theories have been put forward; one, that it arises from milk drawn from cows suffering from foot-and-mouth disease; the other from damp, associated with deficient sanitary arrangements. The author rather questions the first theory, and attributes the disease to damp and bad sanitary management. The treatment recommended is, to give a mixture, consisting of effervescing citrate of potash, with chlorate of potash, or biborate of soda, and sweet spirit of nitre, every four hours, and a gargle consisting of 80 grains of boracic acid, two drachms of glycerine, and one ounce of compound infusion of roses. The diet should be light and nourishing.

4180. *Holmes on a Case of Extirpation of the Larynx.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 809, Mr. Timothy Holmes records a case of extirpation of the larynx. In a man aged 63, above the larynx there was considerable fulness on the left side, reaching up to the jaw, and extending in an irregular manner up the neck. The new growth here seemed firmly attached to the structures around, but the trachea was quite free. It was decided to operate at once and to remove the growth. On the termination of the operation a tube was passed down the œsophagus, through which the patient was partly fed, but he never rallied, and died forty hours after the operation. The disease was epithelioma, and affected the entire epiglottis, and the portions of the larynx immediately adjacent. Mr. Holmes concludes his remarks by stating that, should he ever be called upon to repeat this operation, he would perform a preliminary tracheotomy a few days previous to the extirpation. [In 1881, vide *Medical Digest*, sect. 599: 3, Drs. Gluck and Zeller, before removing the larynx of dogs, made a preliminary section of the trachea, stitching the lower section to the skin of the neck, so as to prevent septic pneumonia from the suppurating wound caused by extirpation of the larynx. The result was most satisfactory.—*Rep.*]

4181. *Morgan on Clearing Tracheotomy-Tubes by Means of the Kitchen Bellows.*—Mr. Morgan, in the *Lancet*, November 1884, p. 809, suggests a very simple contrivance for clearing the tracheotomy tube in cases of diphtheria, &c. The apparatus comprises (*a*) an ordinary kitchen bellows in good condition, and (*b*) a flexible rubber tube of three-eighths of an inch in diameter, and convenient length (say four feet), one end having a vulcanite nozzle which will accurately fit the silver tube, and with a lumen sufficient to permit the free escape of mucus, &c., and the other end having a contracted lip, so as to be air-tight when slipped over the bellows nozzle. The valve of the bellows can easily be fastened down, by screwing into it a small gimlet and tying the latter securely to the lower handle. The working of the apparatus needs no explanation.

4182. *Parker on Sucking Tracheotomy Wounds in Cases of Diphtheria.*—In the *Brit. Med. Jour.*, November 1884, p. 857, Mr. R. W. Parker suggests an efficient protection against the danger of sucking out diphtheritic membrane from a tracheotomy tube. The author has designed a 'trachea-aspirator.' It consists of a piece of India-rubber tubing with a glass bulb in the centre. One end of the tube is passed into the trachea, the other acts as a mouthpiece. The glass bulb is loosely filled with iodoformed, or carbolised, or even plain, cotton-wool, which acts as an effectual filter, and frees the operator from all risk of infection. If the operator have not any tubing at hand, an ordinary catheter may be used; and, to lessen the danger of self-infection, the extremity of the catheter should be covered with a few layers of gauze before applying the mouth for suction.

4183. *Barraclough on an Aspirator for Removing Exudations from the Trachea after Tracheotomy.*—In the *Lancet*, Dec. 1884, p. 1077, Dr. Barraclough suggests a simple form of aspirator for the removal of diphtheritic and croupy exudations from the trachea after tracheotomy. The apparatus consists of an exhausted receiver, obtained by immersing a siphon-tapped soda-water bottle in a vessel of warm water, so that the bottle is covered up to the neck. The water in which the bottle is thus immersed, is brought to the boiling point, and the siphon tap is kept open to allow the escape of the expanded air. When all the air has escaped, the bottle is placed aside to cool with the tap closed, and thus a vacuum is obtained. The only thing now required is two or three feet of rubber tubing and a few metal unions made to fit tracheotomy-tubes of different sizes. One end of the tubing is fitted to the tap of the siphon, and the end with the metal union is fitted into the tracheotomy-tube; everything being secure, the tap can be turned on, and the exudations will be sucked into the receiver.

4184. *Shadwell on an Instrument for the Removal of False Membrane after Tracheotomy.*—In the *Lancet*, March 1885, p. 541, Mr. B. Shadwell describes an instrument he has invented for removing the false membrane from the trachea after tracheotomy. It consists of a glass tube 1½ in. in superficial diameter for a child, and 2¼ in. in length. The opening at one end is free, and the tube is here shaped at its edge so as to fit the convexity of the throat. The other end is closed by a metal cap, from the centre of which projects a metal tube, about 1½ in. long, communicating with the interior of the glass tube. A piece of India-rubber tubing about a yard long is fitted on to the metal tube. When it is wished to aspirate the trachea, the free end of the glass tube is placed over the tracheotomy wound, leaving a margin of skin between the edge of the tube and the incision all round. Suction is applied to the free end of the India-rubber piping by means of an exhausting syringe, and thus any obstruction that may be in the trachea is sucked up.

4185. *Richardson on the Uses of a Common Paraffin Taper.*—In the *Asclepiad*, Jan. 1885, p. 63, Dr. B. W. Richardson states that he finds a common white paraffin taper one of the best bougies for exploring the nasal cavity. The best form of taper is one about 10 inches in length and from one-eighth to one-sixth of an inch in diameter. The taper has other uses. If it be wished to apply iodine evenly to the whole of the nasal cavity, the thing can be done at once by means of the taper. It is most useful for cases of ozæna, as the patients can be taught to carry out the treatment for themselves. Another use of the taper is as a brush; the cotton at one end can be teased out so as to form a most useful brush for throat cases, where the disease is infectious, as it can be burnt directly it has been used. RICHARD NEALE, M.D.

4186. *Roura on the Action of the Larvæ of a Tropical Dipterous Insect upon the Nasal Cavities.*—In the *Gaceta de Sanidad Militar*, and *Revista de Medicina y Cirujia Practicas*, Nov. 22, 1884, an account is given by Dr. Jose Roura of a very grave and sometimes fatal affection of the nasal fossæ, produced by the presence therein of the larvæ of the dipterous insect known as the *Lucilia hominivora*, a species of tropical blow-fly, found in South America, Cheyenne, and the West Indies. In a severe case the disease is attended with the gravest symptoms, and the most disastrous consequences; its course occupies from eighteen to twenty days. The attack commences with sneezing and sero-sanguinolent discharge. This is succeeded by pain at the base of the nose and in the forehead, and then by pain generally distributed all over the head. Epistaxis comes on, and the nature of the disease is now first recognised by the presence of the larvæ in the blood. As it advances, there is developed a characteristic erysipelatous swelling of the nose and lower eyelids. Unless the disease be now arrested, a spot of dark ecchymosis appears on the upper part of the nose, which is followed by destructive ulceration of the soft parts, and exposure of the larvæ in the depths of the nasal cavities. The soft palate is next involved in the destructive process, and then the bony parts of the nose and inner walls of the orbit. The frontal sinuses are attacked shortly afterwards, and the inflammation, spreading inwards towards the cavity of the encephalon, causes an acute meningitis which is quickly fatal. In the later stages the pain is intense, and the fever very high. The prognosis is always doubtful, and, in cases which have not been seen in the early stages, is very bad. Thus, out of fifteen cases reported by another observer (Laboulbèue), nine ended fatally. Dr. Roura had himself seen four or five cases, none of which were fatal, but they were all seen and treated in the early stages of the affection. The treatment pursued by the English medical men in the West Indies is stated to consist in the local use of injections of the infusion of tobacco with turpentine, and a general tonic treatment. The medical officers of the French Marine employ chlorinated lotions, or solutions of alum, and, in severe cases, lotions of perchloride ot mercury of a strength about 1 in 600. Powdered veratria has also been used. Dr. Roura himself washes out the nostrils with 1 in 20 carbolic solution, and applies calomel by insufflation. [The first account of this disease appears to have been given by Coquerel, in 1858, of which there is an abstract in the *Medico-Chirurgical Review* of that year (vol. ii., p. 531). Coquerel describes a case which ended fatally, in which the symptoms were quite similar to those here given. The larvæ are those ot a fly belonging to the tribe Lucilia (L. hominivorax), which, when developed, is ·35 of an inch long, and of a brilliant blue and yellow colour. Coquerel says that the larva is not strictly parasitic, but that its presence in the nasal cavity is accidental.—*Rep.*] WALTER PYE.

4187. *Kazansky on a Case of Tuberculosis of the Fauces and Pharynx.*—Referring to the rarity of faucial and pharyngeal tuberculosis, Dr. A. J. Kazansky, of Cronstadt, describes (*Meditz. Pribavl. k'Morsk. Sborn.*, Dec. 1884) an instance of this affection, recently met by him in a man, aged 40, who sought the author's advice solely on account of pain in the throat. A small superficial ulcer on the right tonsil was found. About ten weeks later, general weakness, slight cough, and considerable dyspnœa appeared. On examining the patient, there were now found numerous small ulcers on the base of the tongue, soft palate, arches of the palate, uvula, and adjacent parts of the hard palate, the posterior wall of the pharynx, on both surfaces of the epiglottis. The ulcers had rugged, thin, undermined edges, and pale, uneven, dirty bottom, covered with caseous film. Both over the edges and bottom there were seen greyish-yellow, yellow, and greyish-red nodules. The mucous membrane of the parts was strikingly bloodless. A small piece of the affected pharyngeal mucous membrane was cut out and microscopically examined to verify the diagnosis. Epithelioid and giant-cells were found. The patient died about three months after the appearance of first symptoms. At the necropsy there was found tuberculosis of the fauces, pharynx, lungs, and bowels. [Gurovitch's article on the same subject may be found in the LONDON MEDICAL RECORD, Feb. 1884, p. 34.] V. IDELSON, M.D.

4188. *Bell on a New Method of Removing Nasal Polypus.*—Dr. William Ralph Bell writes thus in the *Canada Medical Record*, Feb. 19, 1884:—The mode of treatment which, I believe, originated with me, and which I have practised with the very best results in several cases, obviates any trouble from hæmorrhage, which frequently occurs when the forceps or the hook is used; it is painless and very simple. I get my patient to blow strongly through the affected nostril, closing the other with his finger. The polypus will be brought down so that it can be seen through the external nares; then with my hypodermic syringe, charged with a solution of tannic acid in water (of the strength of 20 grains to the fluid drachm), I pierce the polypus with the needle, and inject ten, fifteen, or twenty minims of the solution, according to the size of the tumour. In a few days the polypus shrivels and dries up (tanned); it comes away without any trouble or pain, and looks like a clot of dried blood, my patients usually removing it by blowing the nose or by their fingers.

PATHOLOGY.

RECENT PAPERS.

4189. Cornil and Berger.—Notes on a Case of Scrotal Inclusion. (*Bulletin de l'Académie de Médecine*, No. 9, Séance du 3 Mars, 1885.)

4190 Mazzotti.—Alterations of the Œsophagus in Tuberculosis. (*Riv. Clin. di Bologna*, Jan. 1885. *Lo Sperimentale*, March 1885.)

4191. Fowke.—The First Discovery of the Comma-bacillus of Cholera. (*Brit. Med. Jour.*, March, p. 589.)

4192. Cantani.—Reaction of the Blood of Cholera Patients. (*Gazz. Med. Ital. Lombard.*, March 21, 1885.)

4193. Shepherd.—An Obscure Case of Popliteal Aneurysm simulating Sarcoma. (*Amer. Jour. of Med. Sciences*, January.)

Art. 4189. *Cornil and Berger on a Case of Dermoid Tumour connected with the Testicle.*—A boy, aged 11, had been subject since infancy to a tumour occupying the right side of the scrotum, to which it did not adhere. It was ovoid, fluctuating, opaque, and indolent; the testicle could not be distinguished from it, and it had grown slowly. It had once been punctured without result; but M. Berger tapped it and removed some sebaceous matter containing fine hairs. At the operation a dermoid cyst was discovered; it lay within the cavity of the tunica vaginalis, and the cyst-wall was attached by a vascular pedicle to the mediastinum of the right testicle. That gland lay above the cyst, which was easily separated from the albuginea, to which it was bound by loose connective tissue. The pedicle was severed and its vessels secured. Six months after the operation, the right testicle appeared to be perfectly normal, and was not adherent to the scrotum. This appears to be the first case of the kind where the testicle was saved. The cyst was full of sebum and fine hairs, short and colourless. A pedunculated solid body grew from its inner wall, measuring three centimètres by two. This growth was covered with fine skin, bearing sebaceous glands, papillæ, follicles lined with down, and a few sudoriparous glands. Its interior consisted of connective and adipose tissue; in the deepest portion was a great number of sympathetic ganglion-cells, with thick bundles of non-medullated or Remak's fibres, also a minute cyst lined with stratified columnar epithelium. Cornil and Berger remark that M. Verneuil (*Archives Générales de Médecine*, 1855) in describing all the cases of dermoid tumour of the scrotum and testicle then known, concluded that, as Geoffroy St. Hilaire had demonstrated, the tumour was independent of the testicle, which was merely connected with it by connective tissue. Verneuil found cerebral tissue in one case; Lang discovered sympathetic ganglion-cells in another. Mucous cystic cavities, as seen in Cornil and Berger's case, have been described by Lang, Pilate, of Orleans, and (in two cases) by Verneuil. But Cornil and Berger's case is the only instance where neither pieces of skeleton, amorphous bone, nor cartilage have been found. Alban Doran.

4190. *Mazzotti on Tubercle of the Œsophagus.*—Tubercular affections of the œsophagus exhibit themselves in two forms. In one form, pulmonary cavities or lymphatic glands open in the œsophagus. In this case there may be one or several apertures with hyperæmia or inflammation of the mucous membrane; or there may be tubercles or ulcers, due to the local infection of morbid material escaped into the œsophagus. In the second form, the œsophagus is primarily affected with ulcers of the mucous membrane. Tubercular ulcers are few as a rule; most commonly one or two only; hardly ever more than five or six. They are usually found in the lower third; rarely in the upper and middle portions. The ulcers are small and superficial, mostly oval, with the long axis corresponding to the long axis of the œsophagus. The mucous membrane in recent cases is hyperæmic; in chronic cases, yellow or grey. Sometimes there is narrowing of the canal. Microscopic observation has shown that the inflammatory process commences in the subepithelial connective tissue. By the degeneration of the epithelium ulcers are formed. Tubercle-bacilli are always present. Simple tubercular ulcers of the œsophagus do not give rise to any clinical symptoms whatever. When stenosis occurs, it of course causes grave symptoms. Tubercle of the œsophagus is always associated with tubercle of other organs. It may occur during any stage of the more general disease, and especially in chronic cases An occasional cause is a caustic liquid swallowed by a tubercular person. The treatment is the treatment of the general affection. Nothing can be done, according to the author, in the way of direct or local treatment, except against the narrowing of the canal.

William R. Huggard, M.D.

4191. *Fowke on the First Discovery of the Comma-bacillus in Cholera.*—In the *Brit. Med. Jour.*, March 1885, p. 589, Mr. Francis Fowke reviews the medical literature referring to the epidemic of cholera in England in 1849, and claims for Drs. Brittan and Swayne the priority in discovery of the cholera-bacillus. These observers found in the stools of cholera patients, and in the water of districts where cholera was prevalent, some peculiar corpuscles, which were described as follows. They vary very much in size and apparent structure during the different stages of their development. The smallest are of the same size as, or even less than, blood-corpuscles; their walls refract light powerfully. Fragments of them present the appearance of small segments of circles. A committee was then formed by the Royal College of Physicians of London to investigate the researches of these observers, and Drs. Baly and William Gull came to the conclusion that Messrs. Brittan and Swayne had not discovered the true cause of cholera. Mr. Fowke compares the drawings made in 1849 with those of Dr. Koch, recently published, and considers the corpuscles discovered by Messrs. Brittan and Swayne to be identical with the newly discovered comma-bacillus.

Richard Neale, M.D.

4192. *Cantani on the Reaction of the Blood of Cholera Patients.*—The blood of cholera patients shortly after death is acid in reaction. Professor Cantani has examined the blood during life, and finds that its normal alkalinity is considerably diminished in the asphyctic stage, and that before death it becomes acid. The cause of the acidity is not yet known. Professor Cantani holds that the marked acid reaction of the urine passed at the beginning and end of the asphyctic stage is probably due to lactic acid. May it not be probable that the violent muscular cramps lead to excess of lactic acid in the blood, which, owing to the diarrhœa, is deficient in water, chloride, and carbonate of soda? The cholerigenic microbes, too, may occasion special fermentations, giving rise to excess of acid in the blood. What importance the accumulation of carbonic acid in the blood has, is also to be considered. Cantani concludes that the liquid employed in hypodermic injections must be alkaline in reaction.

G. D'Arcy Adams, M.D.

4193. *Shepherd on an Obscure Case of Popliteal Aneurysm Simulating Sarcoma.*—In the January number of the *American Journal of the Medical Sciences*, Dr. Francis J. Shepherd, of Montreal, reports an obscure and instructive case of popliteal aneurysm, which was under observation for several weeks, and in which there was a total absence of aneurysmal symptoms, and the rational symptoms pointed to sarcoma, either of the periosteum or of the parts about an old popliteal aneurysm, for which the patient had been successfully treated some years before. Amputation was performed, and an examination of the tumour showed it to be solid throughout and composed of fibrine, solidified *en masse.* The orifice of the aneurysm was at the distal end of the tumour, and the blood therefore flowed from below up, with, of course, a lessened stream; the circulation, owing to the obliteration of the femoral above the tumour, being carried on by collateral branches. As there was no cavity in the tumour, the absence of pulsation and bruit is explained. As there was not a single symptom which pointed to aneurysm, an accurate diagnosis seems to have been impossible.

MEDICAL CHEMISTRY.

RECENT PAPERS.

4194. Millard.—A New Test for Albumen. (*Prager Med. Wochensch.*, No. 6, 1885.)

4195. Hammarsten.—Magnesium Sulphate as a Quantitative Test for Globuline and Serum-Albumen. (*Centralbl. für die Med. Wiss.*, 1884, No. 43.)

4196. Cammerer.—Estimation of Urea in Urine and Fæces.

4197. Petri and Lehmann.—Estimate of the Total Amount of Urea in Urine.

4198. Richardson.—Morphia in the Urine of a Morphia Habitué. (*Asclepiad*, Oct., p. 356.)

4199. Lépine and Aubert.—Toxic Alkaloids in the Urine.

Art. 4194. *Millard on a New Test for Albumen.* In the *Prager Med. Wochensch.*, No. 6, 1885, Dr. Millard announces a new test for albumen—viz., carbolic and acetic acids together, with the addition of caustic potash to exact neutralisation, so that neither soluble acid nor alkali-albumen is formed. The advantages claimed are these. 1. There is extreme delicacy of reaction (up to $\frac{1}{500}$ per cent. of albumen; 2. The precipitate does not disappear on heating. The test is positive, and, it is said, free from all error. [That albumen is precipitated by a mixture of carbolic and acetic acids is well known, and may be found in the work of Neubauer and Vogel on urine; but the neutralisation with caustic potash is the feature claimed by Dr. Millard.—*Rep.*]

4195. *Hammersten on Magnesium Sulphate as a Quantitative Test for Globuline and Serum-Albumen.* O. Hammarsten has made extensive observations on this point (see *Centralbl für die Med. Wissench.*, No. 43). Burckhardt had said in the same journal (1883, No. 46) that magnesium sulphate was not a reliable test for globuline, because it also precipitated more or less serum-albumen, and he had had recourse to dialysation for separating globuline. Hammarsten finds, on the contrary, that dialysation is not trustworthy, and that magnesium sulphate is the only reliable agent at present known for precipitating all coagulable albumens except serum-albumen. The serum-albumen precipitated by ordinary tests is always accompanied by a little globuline. Magnesium sulphate can be used to estimate serum-albumen quantitatively thus; either by coagulating the latter by heating the filtered solution after precipitating the globuline by magnesium sulphate, or by subtracting the magnesium sulphate precipitate from the total quantity of albumen. Since, in blood-serum and transudations, besides serum-albumen and traces of peptones, no other albumen but globuline has been found, magnesium sulphate must be regarded as a trustworthy means in the quantitative estimation of globuline also. Denis had previously used magnesium sulphate to precipitate globuline.

4196. *Cammerer on the Estimation of Urea in Urine and Fæces.*—Cammerer recommends combustion with soda-lime in the tube. About 5 to 7 grammes of urine are weighed into a small glass vessel, which is then carefully closed by a paraffin cover, and introduced into the combustion-tube containing a layer of soda-lime 8 centimètres thick. The tube is then filled up with soda-lime, and the absorbing apparatus applied. The paraffin is then melted by gentle warmth, and the urine distributed over the soda-lime. Control-analysis with urea, and different estimations of urea with the same samples of urine, showed perfect agreement. Fæces are treated similarly. From numerous double analyses Cammerer concludes that combustion with soda-lime gives 10·9 per cent. more nitrogen than Hüfner's method.

4197. *Petri and Lehmann on the Estimation of the total Urea in Urine.*—Kjeldahl has lately recommended boiling for some hours with concentrated sulphuric acid for the estimation of urea in organic substances. He then oxidates while hot with powdered potassium permanganates, cools, dilutes, and adds alkali in excess; the free ammonia is then distilled off, and volumetrically estimated (*Centralbl. für die Med. Wiss.*, 1883, p. 878). The authors confirm the accuracy of this process. They take 5 centigrammes of urine and boil it for an hour with 10 centigrammes of strong sulphuric acid (pure acid and fuming acid in equal parts) in a flask capable of holding 200 centigrammes. When quite colourless, a few centigrammes of potassium permanganate are slowly and carefully added, the flame being removed, and the flask, covered with a caoutchouc cap, is set aside to cool. It is then emptied into an Erlenmeyer's flask, treated with 60 centigrammes of a

30 per cent. solution of caustic soda, and heated at first over a flame; then, when boiling begins, over steam for fifteen or twenty minutes, till 100 or 150 centigrammes have passed over, and the distillate is received in 10 to 20 centigrammes of normal acid. If the urine have a specific gravity under 1020, 10 centigrammes are taken.

E. J. EDWARDES, M.D.

4198. *Richardson on Morphia in the Urine of a Morphia Habitué.*—Dr. B. W. Richardson, in the *Asclepiad*, Oct. 1884, p. 356, publishes the case of a patient, aged 47, who commenced to take morphia by the mouth in 1874, and gradually increased the quantity until he was taking 12 to 13 grains three times a day. Dr. Richardson thought he would see if any of the drug was excreted by the kidneys whilst such large doses were being taken. The urine was accordingly carefully collected during each twenty-four hours, and Mr. Wynter Blyth was asked to make an analysis of it for the author. On July 2 the patient took 36 grains of morphia, and the urine yielded morphia equivalent to 1·2 grain of the acetate. On July 3 the quantity taken was 21 grains; the amount yielded by the urine was equivalent to 1 grain of the salt. On July 13 the patient reduced the amount to 6½ grains. The same quantity of urine as was examined on previous occasions yielded 0·18 grain of the salt. Voit has detected morphia in the excretion from the bowels of an opium-eater. Now we have evidence, therefore, that, when morphia is taken into the body in large quantities, it may be eliminated by the bowels and by the kidneys; but it must be admitted that the amount discharged is excessively small in comparison with that consumed. How the larger part is disposed of in the organism, into what it is resolved there, and by what secondary means it is removed, are questions which at present remain altogether unanswered. RICHARD NEALE, M.D.

4199. *Lépine and Aubert on Toxic Alkaloids in the Urine.*—Toxic substances having been found by Bouchard in the urine of people suffering from infectious diseases, and by Selmi and Pouchet in that of healthy people, Messrs. Lépine and Aubert, of Lyons, have made some experiments in order to elucidate the question. The urine passed by two patients during an attack of typhoid fever contained an alkaloid which, when injected under the skin of frogs, produced a diminution in the frequency of the heart-beats; the alkaloid found in the urine of people suffering from acute pneumonia caused the frog's heart to stop in diastole. The toxic substance disappeared after the crisis. J. S. KESER, M.D.

REVIEWS.

ARTICLE 4200.

On Renal and Urinary Affectione. By W. HOWSHIP DICKINSON, M.D., Physician to, and Lecturer on Medicine at, St. George's Hospital, &c. In three parts. Part III.—Miscellaneous Affections of the Kidneys and Urine. London: Longmans, Green, & Co. 1885.

THE third part of Dr. Howship Dickinson's work on renal and urinary affections is devoted to all the diseases of kidneys and urine, other than diabetes and albuminuria, due to organic changes in the kidney, these being treated in the first two volumes. It is now eleven years since the first volume appeared. The present or third volume is a handsome book of 687 pages, printed on excellent paper, in bold type, beautifully illustrated, and containing an index common to it and the preceding volumes. Dr. Dickinson expresses a hope in his preface that the book will not be found too lengthy for students. In this hope we do not think many will share, for in these days medical students are overburdened, and they have scarcely time for the digestion of large works. But we think that practitioners will consider the work as nearly perfect as it is possible to be, when one man undertakes to deal with so large a subject.

The first chapter treats of abscess or circumscribed inflammation of the kidney, and will be read with interest, owing to the revived attention which has lately been paid to the fever following resort to the habitual use of the catheter, when the bladder fails to empty itself by its natural efforts, which fever is occasionally fatal. Sir Andrew Clark's paper, read before the Medical Society of London last year, on what he called 'Catheter-fever,' drew special attention to this subject; although in this country Sir Benjamin Brodie, and after him Sir Henry Thompson, had in their writings discussed the matter, and both these surgeons had shown themselves fully aware of the importance and danger of the fever. The exact nature and cause of the complaint has been, and still is, to some extent obscure. Sir Andrew Clark's paper has done good service, but his remarks excited criticism, because he expressed himself as believing that some of these cases die without any morbid organic change being discoverable in the kidneys after death, while other observers—putting aside cases of death from pure shock—assert that a fatal result never follows the resort to the habitual use of the catheter without microscopic changes being found in the kidney. Dr. Dickinson is one of these latter, and he remarks (with apology for his presumption) that a kidney may appear healthy to the naked eye, and yet the microscope will show definite organic changes. He believes these changes to be brought about by the introduction of septic matter into the kidney, and therefore calls the catheter-fever of Sir Andrew Clark 'uriseptic fever,' although in the heading of the chapter he mentions 'urinary or catheter fever.' Urinary fever is the term preferred by Sir Henry Thompson for this affection; and the French, who are particularly exact and logical, recognise a *fièvre urineuse.* Dr. Dickinson makes no reference to Marcus Beck's interesting researches, which have thrown much light upon the organic changes which occur in the kidney in these fatal cases. With reference to the treatment of these cases, Dr. Dickinson attaches importance to the prevention of ammoniacal decomposition of the urine, and urges the use of acid injections into the bladder. It is curious under the circumstances that he makes no reference to the various antiseptic applications—boracic acid, carbolic acid, corrosive sublimate, &c., so much in use. Doubtless all this local attention is very important, but in this particular connection it is a significant fact that thousands of men are going about daily with bladders full of alkaline urine teeming with vibrionic life, and who, at the same time, are entirely free from any constitutional disturbance.

During recent years, surgery has ventured with success upon the operative treatment of certain affections of the kidney, which not very long ago were left entirely to the care of the physician. Foremost amongst these diseases is renal calculus, and Dr. Dickinson has made himself thoroughly conversant with the work done by his surgical brethren in this department. His chapter on Renal Calculus will be read by all with great interest, for it is fair and straightforward, and is really a full account of all that is at present known about the matter. The remarks on the diagnosis of renal calculus are excellent, and stress is very properly laid upon its difficulties. In summing up, Dr. Dickinson concludes that it is only justifiable to cut down upon a kidney to remove a suspected stone, when the patient's sufferings are continuous and severe, and when, if left alone, he must rapidly succumb.

There are few affections of the urine more obstinate, and more difficult to treat successfully, than the regular passage of an excess of earthy phosphates. Dr. Dickinson attributes this condition to a nervous, mobile, hypochondriacal temperament, and says he has learned to recognise the manner of man in whom it exists. Nothing, however, is said of this condition of the urine being caused by indigestion pure and simple, often the result of taking unsuitable food, but more generally from eating excessively.

The origin of renal and vesical calculi interests all practitioners. Dr. Dickinson begins by quoting Dr. Ord's views, who believes that no calculus is formed without the intervention of a colloid. This may be albumen in solution, exudation in renal tubes, mucus or exudations in renal passages, ureters, or bladder. Dr. Dickinson, however, thinks that calculi are more often formed in obedience to systemic states and consequent variations in the normal constituents of the urine, and points out that stones are not specially common with albuminuria, and diabetes where colloids and viscidity abound, and that calculi are common in proportion to the abundance of their material in the urine, and the degree of concentration of that secretion. Thus they occur in those persons whose habits and predispositions tend to the making of uric acid, and calculous disorders are frequent in India, where the renal secretion is drained of water by that of the skin.

Mr. Cadge's able paper read before the British Medical Association in 1874 is quoted in favour of these latter views, and the comparative absence of stone in the N.W. and S.W. of England is attributed to the softness of the water in these districts. Stone is rarely found in Ireland, and Dr. Dickinson thinks this partly due to the taking of whisky rather than beer, and partly to the free use of the potato. The well-known truth that stone is more common amongst the children of the poor, than of the rich, is attributed to the fact that the former do not have a sufficiency of milk; their diet is therefore too solid, the urine is not sufficiently supplied with water in proportion to its solid constituents, and hence calculus readily forms. Dr. Dickinson, therefore, puts aside the colloidal causation of stone, and, putting aside hereditary and other causes proper to the individual, considers that calcareous impregnation of the water of a district is the overruling influence which appears most strongly marked in the causation of stone. His remarks upon the prevention of uric acid are very good. He draws attention to the importance of drinking plenty of pure water, which certainly is not new, but which of late has not received sufficient attention, and he remarks that poverty is often a cure for uric acid. 'Spare diet and spring water clear, physicians hold are good' is quoted by Dr. Dickinson, so that he differs from Judge Talfourd, who wrote, ''Tis a little thing to give a cup of water.' As a passing comment, we would suggest the substitution of aerated distilled water for the spring water, which must already have some saline constituents. Dr. Dickinson points out that the presence of acetic acid in any liquor is more likely to produce uric acid than that of malic, tartaric, and citric acid; hence beer does more harm than wine or cider. He might have referred to Dr. Prout's valuable and practical teaching with regard to cider. There are always at the very least a few grains of truth at the bottom of all well-established local sayings and opinions, and as the inhabitants of our own cider districts, as well as the inhabitants of the banks of the Moselle abroad, pride themselves upon the comparative absence of calculous disorders in their districts, we think the attention of physicians might well be turned to the use of cider, Moselle, and even Chablis, of all of which Dr. Prout had a high opinion, in the management of the lithic acid, and also of the phosphatic diathesis.

The book is practical throughout. Chapter XXIII., on Hæmaturia, may be singled out as a good specimen of the truth of this remark. Every practitioner called upon to treat a case where blood is passing away in the urine cannot read such a chapter without mental refreshment, and probably not without mental addition. We agree with Dr. Dickinson's opinion of the uselessness of ergot in bleeding from vesical growths; the blood-vessels of such growths have but little contractile power, and hence cannot be acted upon by the drug. The styptics to be taken by mouth, which are mentioned as favourites, are iron alum and the tannate of iron.

We have not space to refer to more than two or three of the many interesting subjects discussed by Dr. Dickinson; and, in conclusion, we can only say that he is to be warmly congratulated upon having accomplished a great task, and upon having produced a book which every practitioner of medicine, and also of surgery, will find a mine of knowledge and suggestion, in all cases of urinary disease, for many years to come. G. BUCKSTON BROWNE.

ARTICLE 4201.

A Practical Treatise on Urinary and Renal Diseases, including Urinary Deposits. Illustrated by numerous cases and engravings. By WILLIAM ROBERTS, M.D., F.R.S., F.R.C.P., Professor of Medicine at the Victoria University, Consulting Physician to the Manchester Royal Infirmary. Assisted by ROBERT MAGUIRE, M.D., Physician to Out-patients, St. Mary's Hospital, London, &c. Fourth Edition, Revised and largely Rewritten. London: Smith, Elder, & Co. 1885.

THIS excellent book has now reached its fourth edition, and not too soon, for the third has been exhausted for some years, and it is one of those works which no good physician's or surgeon's library should be without. We say surgeon's library advisedly, for there is no department of medical science where it is more difficult to say where the physician's domain ceases and the surgeon's begins, than it is in urinary diseases; in fact, many urinary cases must be treated by the physician and surgeon conjointly. Since the third edition appeared, great changes have taken place, and we hope advances made, in the surgical treatment of certain renal diseases. Kidneys are now cut down upon through the loin, and more rarely from the front through the abdominal parietes, and are drained or searched for stone, or even bodily removed, which a very few years ago would have been left entirely to medical treatment. We find that Dr. Roberts expresses no opinion whatever concerning nephrotomy and nephrectomy; this is probably the result of the exercise of a wise and judicious caution in the present state of our knowledge, but when he goes on to state that 'It (nephrotomy) is, however, not recommended by modern surgeons, except when suppuration has taken place and the abscess is manifestly pointing in the loins,' we think that not a few 'modern surgeons' will traverse his statement.

On p. 575, Dr. Roberts refers to Mr. De Morgan's case of villous disease of the kidney, and calls it a cancer, while Mr. De Morgan, in the *Path. Soc. Trans.*, xxi., p. 239, expressly states that the disease was not a cancer, but villous disease of a simple character. In these days, when particular attention is devoted to the microscopic examination of urinary deposits in cases of hæmaturia, in consequence of the increased attention given to the surgical treatment of bladder tumours, we make no apology for correcting Dr. Robert's reference to Mr. De Morgan's most instructive case.

Dr. George Johnson's picric acid tests for albumen and for sugar are referred to. Of their value as qualitative tests Dr. Roberts does not express himself very decidedly, but he gives prominence to the quantitative test for sugar. Dr. Johnson's is a colour-test, and is convenient and expeditious. It depends upon the power which grape-sugar possesses of reducing a yellow solution of picric acid, in the presence of caustic potash, to a red solution of picramic acid, the depth of the red colour depending on the amount of sugar present. Of course, a standard solution of picric acid is required. The test is quickly performed by one who has mastered the details, but Dr. Roberts prefers his own 'differential density method' which is certainly performed easily enough and in a few minutes, but the result has to be waited for until the next day.

Dr. William Roberts has entirely rewritten his articles on albuminuria, and on micro-organisms in the urine, and altogether the profession is sincerely to be congratulated that he has been able amidst his many public and private duties, with Dr. Maguire's assistance, to present it with a new edition of this standard work, thoroughly brought up to the present date. G. BUCKSTON BROWNE.

ARTICLE 4202.

The Care of Infants: A Manual for Mothers and Nurses. By SOPHIA JEX-BLAKE, M.D. London: Macmillan & Co. 1884.

MISS JEX-BLAKE increases the literature on infant life by a manual which is little and good; but by that it must not be inferred that if it were larger it would not be better. On the contrary, it is our belief that the author has allowed herself insufficient space, and thereby done justice neither to herself nor to her theme. Many young mothers will fruitlessly seek in it the information which they lack and its author could furnish, and which, moreover, a manual on the care of infants is bound to contain. We are almost tempted to congratulate Miss Jex-Blake on the specimen of newborn children which she has tended and studied. They have apparently been exempt from most of the miseries that accompany infant life; they have cut their teeth after 'dribbling and secreting saliva;' they have escaped all mishaps; that cruel enemy to infants—stomach ache—was an unknown ache. In addition to their other good luck, they were probably able to wash themselves when 'well covered with water and their head supported by the nurse's left arm.' Miss Jex-Blake furnishes but few additional details, either concerning that critical period of children's life—the one of teething—or with reference to the commonplace, but, nevertheless, important, and to some difficult operations of washing, dressing, and nursing an infant.

If Miss Jex-Blake treats with a high hand and a grudging pen questions of detail connected with infant life, she has, on the other hand, reproduced some sound and interesting data concerning the means and forms of nourishment desirable for infants. The statistics concerning the Massachusetts Infant Asylum contained in her manual are especially interesting. Miss Jex-Blake tells us that, when 'that institution was founded, no care could prevent a very large mortality when infants were brought up by hand only. All the more delicate babies were given a share of breast-milk; if the wet-nurse suckled her own children, diluted cow's milk was given to each child, and the deficiency was thus supplemented.' This practice, which Miss Jex-Blake suggests might be adopted in private families, strikes a death-blow to the old tradition that two different kinds of milk ought not to be given to babies, and at the same time hints at a new order of things. Miss Jex-Blake very rightly observes that, if the nurse's baby be alive, the question arises whether the rich mother is justified in tempting the poor mother to forsake her own child in order to benefit another; that the really righteous arrangement would be to allow the wet-nurse to suckle her own as well as the foster child. The evident difficulty is the certainty that the rich mother would refuse to accept such an arrangement. It is, nevertheless, commendable for many reasons, certainly for those of equity, and ought therefore, to realise the greatest good for the greatest number, a sanitary desideratum. The question arises whether some social organisation could not be arrived at for providing families with wet-nurses, who, with their infants, would be placed under satisfactory medical and moral supervision; thus mothers could inform themselves concerning the antecedents and actual physical condition of their children's foster-mother, also regarding all particulars concerning the child to whom their own would stand in the relation of foster-sister or brother. A visionary philanthropist might even suggest that well-fed healthy mothers who suckle their children and lead a life of happiness and contentment, might give from their fulness to the poor weaklings who die off from want of mother's milk, and systematically act as foster-mothers to luckless children of luckless mothers. Doubtless such a mutual aid system would greatly diminish infant mortality, could it ever become feasible.

Miss Jex-Blake makes another very good suggestion in the chapter entitled 'No Alcohol or Patent Medicines.' She expresses a hope that before long Parliament will include in the Poisons Act all such preparations as Mrs. Winslow's Soothing Syrup and Steedman's Teething Powders, and thus make their sale impossible unless labelled 'poison.' The former, according to a published analysis, owes its stupefying qualities to the presence in it of absolute alcohol, and Steedman's powders contain calomel and morphia. With the ignorant, use may degenerate into abuse; otherwise Miss Jex-Blake's emphatic prohibition that no form of alcohol ought to be given to a baby would have been better replaced by directing mothers, not nurses, to administer two or three times a day two or three drops of the best brandy, should the nursling have griping pains or have a motion with a tendency to be green; she would then recommend a preventive measure, if adopted betimes, and a curative one, if tardily. Likewise her advice that children up to five or six years of age should be fed on milk and farinaceous food, is not endorsed by general practice. It is true that little is known concerning the early development of the digestive glands; but, until accurate physiological data warrant such a regimen, to adopt such advice would be a hazardous experiment. In fine, there is more to praise than to condemn in Miss Jex-Blake's manual. Nurses, and mothers of all ranks, will reap both pleasure and profit from reading and carefully noting its contents.

ARTICLE 4203.

Spinal Deformity in Relation to Obstetrics. By A. H. FREELAND BARBOUR, M.D. Being a Thesis for Graduation in Medicine at the University of Edinburgh, for which a Gold Medal was awarded in 1883.

DR. BARBOUR has divided his subject into three sections; 1. the changes caused in the female pelvis by spinal deformities; 2, the displacements of the viscera in kyphosis; and 3, the influence of the various deformities on parturition.

Dr. Barbour finds that the most constant deviations from the normal standard are these. The iliac crests are extended from before backwards, while the arching of the crests is diminished, and the sigmoid curve lessened. The anterior superior spines are separated beyond the normal limits. The true pelvis is funnel-shaped. The conjugate diameter at the brim is lengthened; the transverse diminished. The promontory is higher in relation to the crests of the ilium, and displaced further back. The conjugate diameter is increased in the cavity. The sacrum is narrowed transversely and elongated vertically; its vertical curve diminished throughout; its transverse curve diminished at the upper portion of the bone. The outlet is usually normal in its diameters, although the transverse diameter may be diminished. The pubic arch is narrowed. The most characteristic feature in the kyphotic pelvis is the increased conjugate diameter at the brim.

Of the seven pelves which Dr. Barbour used as the basis of his study, six afforded corroborative evidence of Breisky's observations that, the lower down the spine the disease occurs, the greater are the changes in the pelvis.

Three preparations of kypho-scoliotic pelves showed that the ilium in the false pelvis is more vertical on the side opposite the lumbar curve, and also looks more inwards than the opposite one. The true pelvis is of the ordinary rachitic type, unless the kyphosis be low down the spine, when it becomes funnel-shaped. The brim is generally diminished in the sacro-cotyloid diameter of the side corresponding with the lumbar curvature; occasionally, however, the reverse is the case. In the cavity, the unilateral contraction is less marked than in the rachitic pelvis. The outlet is of a rachitic shape, unless, again, the kyphosis be low down, when it becomes contracted. There is sometimes eversion of the ischial tuberosity on the side opposite the lumbar curve.

Part II. is a detailed description of the position assumed by the viscera in a frozen section of a case of kyphosis.

Part III. takes into consideration the clinical facts in relation to the deformities just referred to. In the kyphotic pelvis, the contracted transverse diameter of the outlet constitutes the characteristic obstruction to labour. In severe skoliosis, the obstruction to labour takes place at the brim.

The work reflects much credit on the author. On every page there is evidence of careful and patient work. The pelves and spines described in the work are in the museum of the Royal College of Surgeons of Edinburgh. The specimens of frozen sections are extremely valuable, having been made from a patient with kyphosis, who died immediately after labour.

The work forms a handsome folio, illustrated by thirty-eight excellent lithographic plates, and is a valuable and important addition to the question of pelvic deformity. FANCOURT BARNES, M.D.

ARTICLE 4204.

The Principles and Practice of Gynæcology. By THOS. ADDIS EMMET, M.D., LL.D. Third edition. J. & A. Churchill. 1885.

'SO great have been the advance and change of views during the past four years in gynæcology, that the preparation of this edition has necessitated almost as much labour as rewriting the volume.' This, after careful perusal of the work, we can readily believe. 'Every portion has been thoroughly revised; a great deal left out, and much new matter added.' The chapters on prolapse of the vaginal walls; on lacerations at the vaginal outlet—so-called laceration of the perinæum—and through the sphincter ani and perinæum; on the methods of partial and complete removal of the uterus for malignant disease; on the surgical treatment of fibrous tumours; on diseases of the Fallopian tubes; and on the diseases of the urethra, are essentially new, containing the views and experience of the author in a form which has not before been presented to the profession. These chapters include one hundred and seventy-five pages of new material.

The author is strongly opposed to internal applications to the cavity of the uterus; he has entirely given up the practice of late years, as not being based upon sound views of pathology, and believes that in time professional opinion will be influenced in recognising the different forms and shades of pelvic inflammation, outside of the uterus, now usually overlooked, as constituting the chief factor in the diseases of women. The work is one of an eminently practical character, clinical cases, amounting to over a hundred, being inserted to illustrate the author's views of treatment, with over sixty tables, presenting conclusions from a considerable number of observations.

The author's personality is conspicuous throughout; the whole work bears the impress of honest work and conscientious painstaking consideration of the various aspects of the individual subject. Although he has the courage of his convictions and states his views plainly and decidedly, he yet gives with candour the views of others who do not agree with him in many details of treatment.

The author stands deservedly high in his own country as an operative gynæcologist, and those who are working at this subject will feel grateful to him for submitting to the profession the results of his experience, gained at the bedside, and not from the bookshelf only.

The work is essentially a book of reference for the more advanced student and operative gynæcologist.

ARTHUR W. EDIS, M.D.

ARTICLE 4205.

The Student's Guide to Diseases of Children. By JAMES FREDERICK GOODHART, M.D. Aberd., F.R.C.P., &c. London: J. & A. Churchill. 1885.

DR. GOODHART has written a book which is sure to become popular with practical men. It is not too long nor too dogmatic; it is written in an easy style; and in its pages pathological and clinical facts are carefully compared and made to explain each other. A natural arrangement is followed in the plan of the book. From a consideration of diet in health and disease, we are led on to diarrhœa and diseases of the digestive tract, and on each of these vitally important subjects Dr. Goodhart has much to say that will be of great value to all called upon to manage sickly children. Diseases of the respiratory system are also dealt with in a very thorough and satisfactory manner, the chapter on pneumonia being especially worthy of study. Everybody will not be able to agree with the author's views on scrofula and other gland-diseases, but they are clearly and modestly stated, and have much to support them in every-day experience. Many readers will be inclined to turn first to the chapter on rickets and bone-softening, and they will find the 'head of rickets,' 'craniotabes,' and 'epiphysial lesions' shortly, but sufficiently, described, as well as an excellent summary of the morbid anatomy of rickets as it affects all the organs of the body; the remarks upon the blood in rickets, short as they are, are full of suggestion. Diseases of the nervous system are treated with a good deal of fulness; but the chapter on infantile syphilis might be expanded with advantage.

A book of moderate size, giving a concise view of the diseases of children, as seen in the light of modern pathology, has been much wanted; and Dr. Goodhart's handbook will meet this want, to the satisfaction of students and practitioners alike.

ARTICLE 4206.

The Different Aspects of Family Phthisis in Relation especially to Heredity and Life-Assurance. By REGINALD THOMPSON, M.D. London: Smith, Elder, & Co. 1885.

DR. REGINALD THOMPSON has written an elaborate essay dealing with the question of the influence of inheritance in phthisis from a purely statistical standpoint. If a classification of instances of inheritance of disease of all kinds be made, it will be found that they fall into three classes, of which small-pox, syphilis, and insanity may be taken as the types; the mode of inheritance observed in phthisis belongs to the same class as that traced in insanity, that is to say, it is a diseased habit of tissue which is transmitted and not an external agent, though an external agent, such as the bacillus tuberculosis, may play a great part in the actual process of the disease in the individual. The statistics have been accumulated from records of cases seen at the Brompton Hospital for Consumption during a quarter of a century, and Dr. Thompson shows himself alive to the danger of arguing from English experience to the behaviour of the disease in other countries. For England, however, his figures and deductions are carefully made, and will be of value to medical examiners for life-assurance. The tendency towards the disease is more marked when transmitted through the mother, but it ceases to influence the mortality after forty; whereas, when transmitted through the father, it is less marked at any time, except perhaps in boys, but it is more persistent, the liability extending over the whole period of life, up to sixty-five in males and to fifty in women. Double heredity, that is to say, inheritance through both parents, is more serious than single; the liability to the disease does not become slight until after forty-five, and the disease occurs earlier. In fourteen families, where both parents died of consumption, only one child out of every four escaped. Phthisis acquired in one generation may be transmitted by inheritance to the second; moreover, the tendency to the disease may be transmitted by parents who do not themselves develop phthisis. This appears to hold good especially for the mother. All these points, and many others upon which we have not touched, are fully illustrated by elaborate statistical tables.

The essay is of an exceedingly technical character, and, possibly owing to this circumstance, it is written in a compressed and somewhat involved style, which demands the most careful and laborious reading. Upon the important subject with which it deals it will doubtless become a classic, and will be an indispensable part of the outfit of the medical and actuarial officers of insurance companies.

ARTICLE 4207.

A Handbook of the Theory and Practice of Medicine. By FREDERICK T. ROBERTS, M.D., B.Sc., F.R.C.P., Professor of Therapeutics in University College; Physician to University College Hospital, &c. Sixth Edition. London: H. K. Lewis.

THE hearty welcome which was on all hands accorded to the first edition of this well-known manual is likely to be extended to the present one. Indeed, the popularity of this text-book cannot be better evidenced than by the fact that in twelve years, six editions have been called for, or, on an average, one every two years.

The relative merits of different literary styles in the composition of hand-books for students will perhaps always remain an open question. But however much we may regret the gradual disappearance from our professional literature of the scholarly method of such works as Watson's Classical *Lectures* (a characteristic of which the feverish hurry of the present age is leaving undisputed possession to the past), there can be no doubt that, as an example of the concise, tabulated, and categorical style, the text-book before us carries the palm.

The book has been carefully revised and worked up to date, and many subjects which are now attracting attention receive fair consideration at the author's hands. Controversial views of any importance are impartially laid before the reader, and in these cases the absence of dogmatism is in the highest degree commendable.

In reference to diseases of the throat, it is satisfactory to find that, although in a manual of this kind extended details are obviously impracticable, due importance is attached to, and stress laid on, the various methods of local treatment by means of brush, spray, insufflation, &c. The importance of tonsillectomy, too, in cases where the chest is beginning to suffer from interference with the respiratory function, is duly insisted upon. Since it is certain that, much more frequently than is commonly supposed, lung-complaints and debilitating effects upon the general health are the direct results of the widespread but unjustifiable prejudice against the removal of the tonsils, it is well that this much neglected duty should have due prominence afforded to it in the teaching of the schools.

On the subject of phthisis, Dr. Roberts gives full place to the bacillus tuberculosis, but insists, as it seems very properly, upon the fact that phthisis as a clinical disease must not, as is frequently the case, be held to be coextensive with pulmonary tuberculosis. The fact is that the essential clinical phenomena of phthisis are really consequent upon a pulmonitis, whether resulting from ordinary bronchopneumonia or from multiple localised nodular pneumoniæ (tubercle of the lung), the result of the irritation occasioned by colonies of bacilli. The methods of staining the bacillus tuberculosis originated respectively by Ehrlich and Heneage Gibbes are fully detailed.

In the section on examination of the urine, reference is made to all the recent methods, including Pavy's test-pellets, and especially Oliver's test-papers. The physical examination of the nervous system, with its details of reflexes, electrical reactions, ophthalmic signs, &c., is described in such a manner as to be readily intelligible to the student.

On the subject of treatment, most of the new remedies whose claims have survived the injudicious advocacy of enthusiastic champions, find a place. Convallaria and caffeine in heart-disease, hamamelis in hæmatemesis and other forms of hæmorrhage, euonymin and iridin as cholagogues, and many others, are mentioned; while a special appendix is devoted to antipyrin and cucaine.

Altogether, it may be safely predicted that this work will preserve in the present the high character and prestige which it has justly attained in the past, as a work of reference for the practitioner no less than as a text-book for the student.

KENNETH MILLICAN.

NEW INVENTIONS.

ARTICLE 4209.

A PERFECT TUBE-CLEANER.

THIS is a very ingenious little invention for the cleansing of the tube attached to feeding-bottles for infants. The difficulty of thoroughly removing from these tubes all clots of sour milk and other accidental impurities is well known to careful mothers and nurses. The cut printed below will show how this is effected by Mr. Richards's tube-cleaner, but it cannot show the combined elasticity and firmness of the twisted wire and the arrangement of cotton at one end of the cleaner. These specialities, which constitute the distinguishing feature of the new tube-cleaner, must be noted in the use of the little apparatus. It consists of a rod of fine twisted wire, some fourteen inches long, at one end of which is a small cotton brush and a loop, the latter being intended to facilitate the passing of the India-rubber tube through the aperture in the cork of the feeding-bottle. By means of the cotton brush the teat, with a little manipulation, can be most effectually cleansed. At the other end the rod terminates in a coil of wire, arranged in the form of a cone, its apex joining the rod. The end bearing the cotton is first inserted into the tube, and the whole length of the rod is drawn through it. The Perfect Tube-Cleaner is patented by Charles Richards & Co., of Seething Lane, E.C., and can be had of all chemists at a very small price. We recommend it in the interest of the babies of the community.

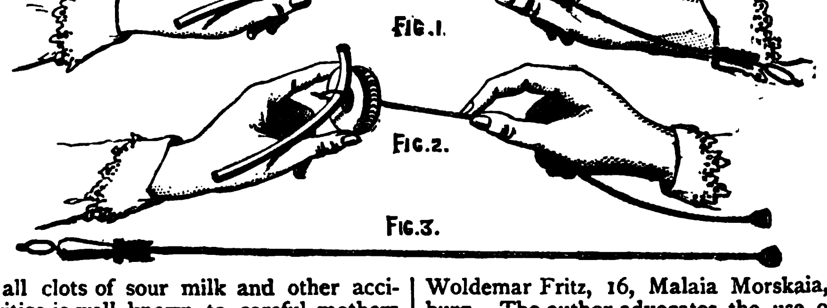


FIG.1.

FIG.2.

FIG.3.

ARTICLE 4210.

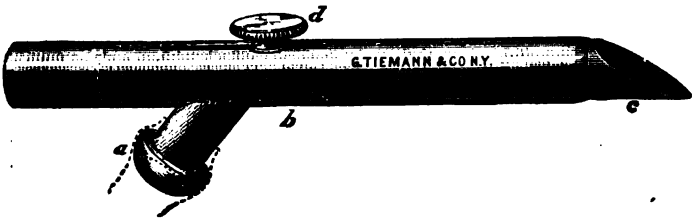
LEWIS'S NEW PORTABLE APPARATUS FOR THE TREATMENT BY HOT AIR.

IN the *Vratch*, 1884, No. 17, p. 283, Dr. E. Th. Lewis, of St. Petersburg, describes a new portable hot-air bath of his own invention. It consists of an oak chest, all six walls of which are on their inner surface plated with iron sheets; they are held together by means of easily removable hooks and screws. The apparatus may be easily placed and brought in working order at every sick-room, near the patient's bed. The patient enters the chamber, sits down on a fenestrated bench covered with two-folded bed-sheets; then the lid of the box, containing an opening for the bather's head, is lowered and adjusted so that the latter remains protruding above the lid, while the rest of the body is inclosed within the air-tight box. The space between the patient's neck and the edge of the opening in the lid is closed by a cravat-like piece of soft leather, duly tightened by means of a string; in addition, to completely prevent any escape of hot air (or vapour) from the bath, a dry four-folded sheet is put round the patient's neck. The apparatus is best heated by means of a spirit-lamp placed outside. There are present, also, all the appliances which are necessary to convert the apparatus into a steam bath or fumigating chamber. Dr. Lewis's apparatus is made, at the price of 150 to 200 roubles, by Mr. Woldemar Fritz, 16, Malaia Morskaia, St. Petersburg. The author advocates the use of hot air or steam baths in obesity, chronic rheumatism, scrofula, constitutional syphilis, chronic bronchial catarrh, pleuritic effusions, congestion of the liver, Bright's disease, peripheral paralyses, neuralgia, certain skin-affections, &c. The method is contra-indicated in cases of considerable pericardial dropsy and ascites; also in the presence of large accumulations of mucus in the bronchi; further, in cases of difficult breathing or considerable intermittency of the action of the heart.

ARTICLE 4211.

A NEW AND SIMPLE OVARIOTOMY TROCAR AND CANNULA.

WITH a view of obtaining a less complicated as well as a less expensive ovarian trocar and cannula, than the well-known and excellent instruments of Sir Spencer Wells and the 'Fitch dome,' Dr. Edward S. Dunster, of Ann Arbor, Michigan, suggested to Mr. Stohlmann (senior partner of the house of George Tiemann & Co., of New York, the well-known surgical instrument makers), to make for him the instrument illustrated in the accompanying woodcut. The drawing (which is half-size) shows so clearly what the instrument is, that no elaborate description of it is necessary. It consists simply of two concentric and accurately adjusted tubes, one sliding within the other, thus making a cannula and trocar proper. The cannula (c) is adjusted by the set-screw (*d*), and has in it a fenestrum shown in dotted lines at *b*. When the cutting point of the cannula is withdrawn into the trocar, this fenestrum comes directly opposite the outlet tube (*a*), to which rubber tubing, at convenience, is to be attached. The instrument, in using, is held in one hand just like a pistol; the proximal end of it, which is capped with a solid convex plate, is placed in the hollow of the hand; the middle, ring, and little fingers grasp it in front of the outlet (*a*), while the thumb and index-finger are free to fix or move the cannula forward or backward as required by means of the set-screw (*d*). When the cutting point (*c*) is withdrawn into the trocar, there is no sharp edge or point which can damage the tissues into which it may be introduced.



The special advantages claimed for the instrument are these. 1. It can be held and used with one hand alone, leaving the other hand free for the operator to use as may be required, while the grasp (pistol-fashion) is so firm that the instrument is under perfect control. 2. The construction is so simple that the instrument can be cleaned and kept clean with ease; in these days of antiseptic surgery this feature in an instrument is an important consideration. By removing the inner from the outer tube every portion of both inner and outer surfaces of the instrument can be easily reached with a carbolised cotton swab, and there are no sharp angles, corners, or crevices in which septic matter can lurk to do its deadly work by being carried into the tissues in operating. 3. It is, or ought to be, furnished at much less expense than either the Spencer Wells or the Fitch dome.

The instrument is nickel-plated, and burnished inside and out. Dr. Dunster states that he has used it in several ovariotomies, and that it works with perfect satisfaction. He suggests that, if made of various smaller sizes and lengths, it will be found an excellent and handy substitute for the trocars in use in general surgery.

DIETETIC NOVELTIES.

ARTICLE 4212.

THE FRIEDRICHSHALL WATER.

RENEWED attention is being drawn in this country to this natural mineral water, which is of ancient and high reputation as a customary aperient, having a special value in respect to its alterative and diuretic properties. That which essentially differentiates Friedrichshall from many of the aperient waters which are most in use, is its richness in chlorides; the effects of the sulphate and chloride of sodium combined, give to Friedrichshall water a remarkable influence in promoting tissue-change, and in producing the oxidation of the albuminoids. There is also a great body of evidence that it has a great advantage over other waters which owe their properties chiefly to the sulphate of soda and the sulphate of magnesia, inasmuch as the digestion is far less easily deranged by Friedrichshall water than by its congeners. It has in Sir Henry Thompson's hands proved to be especially effectual, not only as an occasional aperient, but also as a digestive and alterative agent; and the favourable influence of the chlorides upon the processes of digestion and diffusion, and upon tissue-change generally, are fully recognised by him as well as by the late Professor Frerichs and other of the most eminent German physicians. Its effect, too, is very mild in ordinary use, while it has the peculiar advantage that it may be employed in diminishing doses, while most aperients, as is well known, exhaust the energy of the bowel, and need to be used in constantly increasing doses. Thus, whereas the ordinary Bitter waters, distinguished by their richness in sulphate of soda and magnesia, cannot be taken habitually with impunity, Friedrichshall, by reason of its richness in chlorides, can not only be so taken, but is especially suited for that purpose. This peculiarity of Friedrichshall readily explains the favour with which it has been viewed for a series of years; but in this country, at least, the especial advantage of its high content of chlorides has hardly received the attention which it deserves. Friedrichshall is recommended by Thierfelder in Ziemssen's Handbook in disorders of the liver; by Frerichs for gall-stones and biliary colic;

by Naumann in diseases of the heart and blood-vessels; by Eisenmann in the congestions of pregnancy; and by Scanzoni very especially in the ordinary constipation of pregnant women. It is a highly efficient alterative, correcting disorders of the blood. A completely special application of Friedrichshall is found in the treatment of the affections incidental to constitutional debility in children, especially in the scrofulous forms. In glandular swellings, and affections of the skin and eyes, with thickening of the tissues and constitutional torpidity. Friedrichshall has, with suitable diet and open air exercise, in the hands of Helft, Mosler, and Löschner, been found to be a potent agent. Löschner, indeed, says that there is scarcely a more powerful anti-scrofulous agent than Friedrichshall water.

The recent researches of British physicians and physiologists, such as Ringer and Hayes, have added greatly to our knowledge of the relative importance of the chlorides and sulphates in bringing about diffusion changes and in stimulating the action of the bowel. These researches have tended greatly to increase the value set upon a water such as Friedrichshall, which is so rich in the chlorides; and thus, no doubt, a more extended use of this water may henceforth be looked forward to in this country.

Article 4213.

NON-GOUTY WINES.

Attention has recently been drawn to port wine, and some physicians have been endeavouring to find it of such a character that they could safely recommend its moderate consumption to their patients. Amongst other correspondence on the subject, a letter appeared a short time since in the columns of a morning contemporary, from Messrs. Page & Sandeman, the old-established wine merchants and shippers, of 5½ Pall-mall, in which the question was asked 'Is port a gouty wine?' The firm, whose knowledge of port wine is entitled to considerable respect, call attention to what has probably been lost sight of by many, that gout is comparatively unknown in Portugal, because the inhabitants use the produce of their vines in a different manner from the custom that prevails in England; that is to say, they drink the wine old, thoroughly matured in wood, whereas we in England prefer comparatively heavy port of a full vintage character; and they urge that, if our consumers were to adopt the Portuguese plan, we should hear but little of port wine gout in these islands. Messrs. Page & Sandeman may have gone further, and said that so-called connoisseurs here have sacrificed too much to colour, as the common argument used is that wine thoroughly matured in wood loses both colour and flavour. But it seems an absurd thing to study the colour of a wine, if the means employed in giving the colour so prized make it injurious; and there is sound reason for presuming that our Portuguese friends are correct in the view they take of the mode of using their own produce. These views are strengthened by the opinions held by Dr. Peter Hood, an authority not to be gainsaid, who, in the third edition of his well-known work on *Gout and Rheumatism*, advocates the drinking of port matured in wood as in Portugal, and says that a moderate use of such a wine is more likely to keep gout at bay than to occasion it. But he contends that, under the conditions in which we have been accustomed to drink it, the habitual use of port wine is wrong in theory and practice. Dr. Hood considers that why port wine may be a cause of gout is 'that it is bottled too soon.' It is strongly fortified with alcohol prior to importation, and its fermentation is checked, so that it may keep for many years. The large amount of crust in old bottled port clearly shows that the wine which yields it has not been kept in the wood long enough to throw down a quantity of acid salts, which are deposited more readily in bulk. He further says that, if wine merchants would have a good supply of port matured in wood as he describes it, it would again become a favourite beverage, to the great advantage of consumers. Dr. Hood quotes a case where he actually prescribed a certain quantity of such a port wine daily to a patient recovering from gout. Such wines as these, which Dr. Hood recommends, can now be obtained of Messrs. Page & Sandeman at from 48*s.* to 50*s.* per dozen. The youngest of these wines is about twenty-five years old; and a noted brand with the firm is called 'Newfoundland' port, simply because it is a class of wine that is shipped largely there, is composed principally of 1847 growth, and is sold at 50*s.* per dozen. They assert that these wines are the finest and purest that can be shipped, and have reached their present state of maturity in wood. Having seen these wines, we can testify to their fine flavour and aroma, and we know that many members of the profession are prescribing them with advantage to their patients. As the firm have always made a speciality of maturing port in wood, and are continuing to do so, they can always be obtained from them.

Article 4214.

DAY'S EXTRACT OF COCOA.

This preparation has, we believe, obtained a considerable local reputation. It is a good pure cocoa free from added sugar or starch. It is palatable and certainly deserves a trial. It is made by Mr. Edward Day, 2 King Street, Huddersfield.

Article 4215.

FRY'S COCOA.

We have recently had an opportunity of examining Fry's Pure Concentrated Soluble Cocoa. It seems to us to be a pure preparation, and to be free from any deleterious substance. It is palatable, and is taken even by delicate people without difficulty.

MISCELLANY.

Dr. Robert Koch has been appointed Professor of Hygiene in the University of Berlin.

Dr. Panum, Professor of Physiology in the University of Copenhagen, who presided over the International Medical Congress held last year, died suddenly a few days ago.

Friends of the late Peter Squire will be interested to know that the unveiling of a medallion portrait of him will take place at the Pharmaceutical Society's house, 17 Bloomsbury Square, W.C., on Wednesday, May 20, at 4 p.m., by Sir Spencer Wells, Bart. Cards of admission may be obtained from the secretary, 17 Bloomsbury Square. Any medical practitioner will be admitted, with a lady, on presentation of his address card.

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A great improvement on the various forms of Liebig's food. When mixed with warm milk the pancreatic ferments act on *both the starchy and albuminoid* elements of the mixture, so modifying the casein that it cannot curdle into solid masses in the stomach. In no other food has this result been attained. Experience has shown that delicate children and adults with weak digestions can enjoy and retain this food when all others disagree. Tins, 1*s.* 6*d*, 2*s.* 6*d.*, and 5*s.* each.

OPINIONS OF THE MEDICAL PRESS.

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BRITISH MEDICAL JOURNAL, April 1st, 1882.—'Time and use have justified the claims put forward for these preparations.'

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Price 8*s.* per lb. 7 lb., 7*s.* 6*d.* per lb.

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Recommended by Dr. H. Miller, of Glasgow, and other eminent practitioners, as an application in acute affections of the breast, to prevent suppuration and arrest the mammary secretion.

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Extract. Cascaræ Sagradæ Fluid (Ferris & Co.)

The bark of *Rhamnus Purshiana*, under the name of Cascara Sagrada, is now being largely used as a *tonic laxative*, and a remedy in all cases of habitual or obstinate constipation, with very satisfactory results.

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The Original preparation introduced by Ferris & Score. A really reliable preparation of Ergot, in a convenient form. Dose 30 minims. Will keep good for any length of time, under ordinary circumstances.

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Lily of the Valley. A new and important remedy for functional and organic diseases of the heart.

Price—Fluid Extract, 12*s.* per lb.; 7 lb., 11*s.* 6*d.* per lb. Tincture, 6*s.* per lb.; winch. quart, 5*s.* 6*d.* per lb.

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A very agreeable and elegant formula for the administration of Bismuth in combination with Spirit of Chloroform, Hydrocyanic Acid, Morphia, and Aromatics.

Price—5*s.* per lb.; winch. quart, 4*s.* 8*d.* per lb.

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Prepared exclusively from Opium. The safest and best preparation of Opium. Produces neither Headache, Sickness, nor Constipation.

Dose—the same as that of Tinct. Opii, *P.B.*

Price—8*s.* per lb.

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The London
Medical Record

A MONTHLY REVIEW OF THE

Progress of the Medical Sciences and of Subjects relating to Public Health

EDITED BY ERNEST HART

FOR CONTENTS SEE PAGE XV

LONDON
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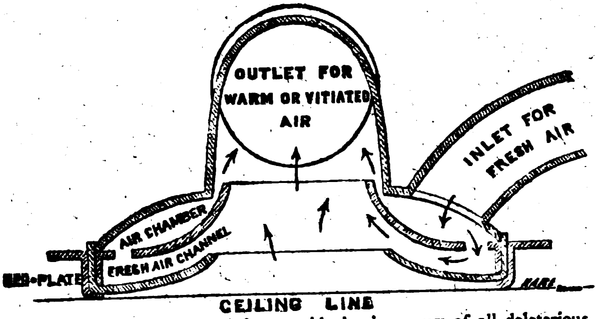
THE GREAT PROBLEM OF THE 19th CENTURY.

VENTILATION WITHOUT DRAUGHT.

The hitherto unsolved problem of 'Ventilation Without Draught' is to be seen practically illustrated at FREDERICK HENRY SMITH'S Test Room, No. 68, 52 Queen Victoria Street, E.C., Patentee of the Automatic Siphonic Aspirator System of Ventilation. A personal inspection invited.



Extract from the Times, *March* 14, 1885, *page* 7.

VENTILATION WITHOUT DRAUGHT.—This desideratum appears to be accomplished by a syphonic system devised by Mr. Frederick H. Smith, at whose offices, 52 Queen Victoria Street, London, we recently inspected the arrangement. The air supply is conducted into the apartment from the external atmosphere by means of air ducts, which terminate in distributing passages at the floor level. The exit for the vitiated air is placed in the ceiling, and consists of two tubes, a large and a small one, running parallel to each other between the floor joists in the case of rooms having others over them. In the case of rooms on top floors, or those having the roof directly over the ceiling, the tubes are placed concentrically, but the action and results are the same. The larger of the two tubes carries off the vitiated air, while the smaller one forms an induction tube for cold air, its outer extremity being open to the atmosphere. These two Tubes, or conduits, are so connected that the passage of the heated air through the larger tube induces a current of cold air through the smaller one, in a continuous stream. The result is a rapid clearing away of all deleterious gases and products of combustion as they accumulate, and the preservation of a pure atmosphere, at an equable temperature, in the apartment. In a small room at Mr. Smith's offices, in which five large gas jets were burning, the atmosphere was apparently quite innoxious at the level of about 7 ft., the temperature being about 60 deg. Fahr. At a higher level, however, and especially near to the ceiling, the temperature was high, and the air greatly vitiated. It was demonstrated that this vitiated air was being drawn off through the exit tube, which acted as a powerful sucker. After turning off the gas burners, and upon the temperature of the room generally becoming lowered and equalised, a feeble upward action was still maintained in the upcast tube, but there was no down draught whatever. The system has already been applied to a church and other buildings with acknowledged success.

Extract from the Annual Report of the 'French Hospital and Dispensary,' issued 29th January, 1885.

We have also to return our best thanks to Mr. Smith, who undertook gratuitously to repaint one of our wards and to apply a new system of ventilation of his own invention, which was very successful.

Letter from David Urquhart, Assistant Engineer to Colonel Sir Francis Bolton, C.E.

4 The Sanctuary, S.W., London, November 22nd, 1884.

F. H. Smith, Esq., 52 Queen Victoria Street, E.C.

In reply to your inquiry, I have much pleasure in certifying that your system of ventilation as applied to the 'Island Room' of the Illuminated fountains at the Health Exhibition reduced the temperature during the displays from about 110 degs. to about 70 degs., and thus enabled the men to perform their duties without inconvenience.—Yours faithfully,

DAVID URQUHART.

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For Gynæcological Examinations, Ophthalmic and Minor Operations.

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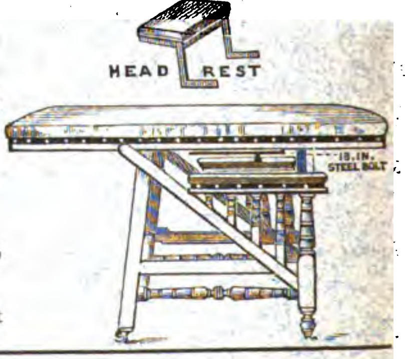

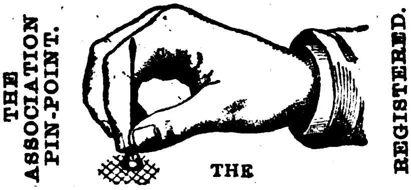

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containing 10 per Cent. Carbolic Acid.

Prepared by J. B. BARNES, Pharmaceutical Chemist, Trevor Terrace, Knightsbridge, London, S.W.

The London Medical Record.

Article 4216.

COMENGE ON FERRAN'S INOCULATIONS.

The *Siglo Medico* for May 24 gives an interesting paper by Dr. Comenge read before the Academia Medico-Quirurgica, describing his own experience of inoculation and a visit paid by him to Dr. Ferran in Alcira, where he witnessed 3,000 inoculations. The inoculation consists in the subcutaneous injection of a cultivation-liquid in the back part of the lower third of the arm. The liquid inoculated is prepared broth, containing the bacilli of Koch, previously attenuated by successive cultivations. These were originally obtained from Marseilles, Toulon, and Italy; some, however, are at present obtained from the cholera-dejections of the patients in Alcira. The quantity of liquid injected varies with the age and constitution of the patient, and with the greater or less richness in germs of the liquid. From two millimètres to a cubic centimètre in each arm is the dose. Before proceeding to the inoculations, Ferran carefully examines the liquid, to determine its richness in germs, its purity, and degree of evolution.

The inoculation causes a bruised feeling in the arms, general malaise, and slight fever, symptoms which disappear in twenty-four hours. In some women and peculiarly sensitive persons, inoculation has given rise to alarming symptoms. After six hours there are intense pain in the arms, faintness, cold, vomiting, and diarrhœa, with cramp in the extremities, burning in the epigastrium, thirst, and finally marked fever, simulating an attack of cholera. These symptoms, however, also disappear in twenty-four hours, leaving only a certain amount of prostration. Dr. Comenge was himself vaccinated with the large dose of 1 cubic centimètre of the strong cultivation in each arm. He experienced great pain in the arms, fever, loss of appetite, and thirst; ten hours after, a general chill, like ague; pulse, 130. His urine was suppressed all that night and the next morning. In fifty hours he was well. Re-inoculation produced no symptoms.

Ferran asserts that he has never seen any dangerous symptoms follow, no matter what the age, constitution, or sex. In Alcira (20,000 inhabitants), ten or twelve 'suspected cases' occurred daily; 5,300 persons were inoculated; of these five only had the disease in a mild form. One case is especially interesting. A boy, whose two brothers died of the 'suspected disease,' was inoculated. A few days later, he became ill, presenting the same symptoms which had proved fatal to his brothers. When Dr. Comenge saw him again, a few hours later, he was quite well, playing on the same bed on which his brothers had died. Ferran is far from considering the prophylactic efficacy of his inoculations as proved; the test of an epidemic is yet wanting; probably Alcira will supply the proof required. 'The operation is founded on the same scientific principles which have led Pasteur to discover the inoculation of carbuncle, of the cholera of fowls, of the roseola of swine, and of hydrophobia. The inoculation of cholera, like other inoculations, will not absolutely prevent an attack of the disease; we hope it may mitigate it. It is to be supposed that the immunity conferred is not permanent. Re-inoculation, therefore, should be practised every month or six weeks during the prevalence of an epidemic. Immunity is not obtained until after a certain lapse of time after inoculation; an attack of cholera supervening within five days would not be influenced by the inoculation. The prevalence of an epidemic is not an argument against inoculation, any more than in small-pox. Anticholeraic inoculation can never cause an attack of cholera.' Dr. Comenge examined many of the 'suspected cases,' and has no doubt of their true nature. Taking one case as typical, the brother of the boy above referred to, who recovered, thanks to the inoculation; he found him lying by the side of the dead body of his brother. The aspect of the corpse was characteristic: lead-coloured, eyes sunken, extreme emaciation. The little patient was indifferent, greatly prostrated, scarcely able to answer the questions put to him; he was emaciated, his eyes sunken and glassy; his surface was cold, his tongue white, moist, and cold, his face cyanotic; he had thirst, his voice was sepulchral; respiration was shallow and hurried, breath cold, radial pulse only to be felt high up. The illness began with malaise, pain in the stomach, thirst, vomiting, serous diarrhœa, cramps, &c. Comma-bacilli were found in the dejections. All the medical men, many of whom have had great experience in cholera, agree in so calling the prevailing epidemic; but they dare not say so publicly. 'The people, in open rebellion against the monstrosity of the sanitary means employed, would certainly attack the doctor who declared the true sanitary condition of the country.' The epidemic, however, is not so grave as many others; those living under bad hygienic conditions, the old and the very young, are chiefly attacked. All those attacked drank river-water (that of the Jucar); on its banks are many villages and towns, and in nearly all these have suspected cases occurred. G. D'Arcy Adams, M.D.

Article 4217.

DUHOUREAU ON THE PERONOSPORA FERRANI AND INOCULATION FOR CHOLERA.

Dr. Ferran claims to have discovered the complete evolution of the specific microbe of cholera, thus complementing and completing the work begun by Koch, and to have proved the efficacy of inoculation of the attenuated cholera-virus as a protective measure. This preventive inoculation has been tried on a large scale in Alcira where cholera is prevalent. Out of a population of 16,000, 5,432 persons have been inoculated since May 1, and of these only seven have been attacked by the disease in a mild form; of the unprotected population, about 10,500, sixty-four have been attacked, and of these thirty died.

A pamphlet by Dr. Duhoureau, of Cauterets, contains the fullest account of Ferran's researches yet published. These may be considered under two heads: 1. Morphology of the cholera-microbe; 2. Its pathogenic and its prophylactic action.

1. *Morphology.*—Cultivations of the bacilli, like cholera-stools, quickly become covered with a slight mycodermic pellicle consisting chiefly of bacilli. If a cultivation be made in broth or gelatine, spirilla

appear. When these are placed in a sterilised alkaline broth, one sees very fine mobile spirilla, which afterwards become wavy flexuous filaments. That these always proceed from the microbe described by Koch, is shown by their becoming changed into comma-bacilli when placed in gelatine. When a drop of liquefied gelatine from the bottom of the cone formed in the cultivation-tube is examined, certain spirilla are found to have a little sphere at one of their extremities; this is still better seen in cultivations in broth. This sphere or oögonium, formed of hyaline protoplasm, grows to the size of a blood-corpuscle. Later the protoplasm contracts, leaving part of the sphere empty, showing the hyaline diaphanous envelope (periplasm) completing the sphere in the part not occupied by the material of the oögonium transformed into oösphere. The part of the sphere in relation with the spirillum is the most opaque, and here segmentation takes place, producing very visible granulations. From the same filament from which the oögonium arises appears sometimes a much smaller sphere, which without doubt constitutes the pollinodia, whose part is to fecundate the oögonium. After a certain time the hyaline periplasm is seen to rupture after fecundation, the walls of the vesicle disappear, and the granulations remain swimming in the cultivation-liquid. The evolution of the elements which result from the segmentation of the oösphere is the following. Before rupture, one of the granulations is from four to five-thousandths of a millimètre in diameter; the others vary from this to 0·5 thousandth of a millimètre. In a favourable medium some of the granulations increase to the size of a red blood-corpuscle, and become converted into a mulberry-shaped body; others appear sterile, grow to a great size, and remain homogeneous. The fertile granulations, as they grow, become mammillated as if they contained numerous nuclei or cocci. Watching with close attention, one can see shoot out from some point of the sphere a long very fine filament 0·5 thousandth of a millimètre in thickness; often two filaments shoot out simultaneously. The part nearest the sphere is so transparent as to be almost invisible, but farther off it is more evident. At the moment of separation it is only slightly flexuous, but it soon acquires the characteristic zigzag of the spirillum. When this is again cultivated, it gives rise by scissiparity to the forms described by Koch. This, then, is the cycle of evolution: spirilla, oögonia, and oöspheres; granulations, mulberry-shaped bodies, and again spirilla arise from these muriform bodies to repeat this evolution. There is also fissiparous generation. Besides the spiral forms, filamentous or simply flexuous forms are observed; but in the first cultivation of a series in a liquid medium, starting from colonies proceeding directly from the commas of cholera-stools, extremely fine spirilla predominate. As we advance in the series, the flexuous filaments prevail in number over those of the primary spirillar form. The fact that the finest spirals are those proceeding directly from the muriform bodies or from the generation following them, added to another analogous fact offered by the seed coming from the dejections, justifies the belief that the primary agent of the cholera-infection in man is not the comma-bacillus, but rather the little mulberry-shaped ova from the oöspheres, which are contained in an envelope sufficiently thick and resisting to protect them from the action of the gastric juice. This reproduction is so rapid, that one drop of the cultivation is sufficient to infect in six hours a litre of broth kept at 37° C. (98·°6 Fahr.) The muriform bodies are developed even in acid media, consequently the acidity of the gastric juice does not oppose their entrance into the intestines as it does that of the bacilli.

The best cultivation-medium is good beef-broth. sterilised, to which is added a small quantity of human or pig's bile, and made alkaline with caustic soda. The sixth part of the matrass only should be filled. The cultivation must be kept at 37° C. When the broth becomes thick, it must be kept for two hours more in incubation, and then an equal quantity of similar sterilised broth prepared in the same manner is to be added with due precautions. The cultivation is then to be removed to a cool place, and kept at 15° C., taking care to neutralise the acid reaction due to the life and growth of the microbe. Under these conditions, fissiparous generation is checked; the existing filaments grow strong, and give birth more easily to numerous oögonia, which go through the circle described if the supply of nutriment be sufficient. If the incubation is made at a higher temperature, fissiparous reproduction would be so active that the nutritive material would become exhausted before oögonia could appear. Placed in these conditions, if the temperature be not too low, the microbe in a few hours gives birth to an infinite number of oöspheres full of morbific comma-producing granulations, so small at first as to pass through new porcelain filters. Two drops of a filtered cultivation infect in forty-eight hours a litre of broth kept at 37° C., giving rise to characteristic spirilla. Low temperatures paralyse segmentation; but the spirals or filaments already formed continue to grow and give birth to oögonia, which even at these temperatures are converted into oöspheres with granulations, which are in their turn converted into comma-producing muriform bodies, and thus the cycle of evolution is completed.

2. *Pathogenic Properties and Prophylactic Action of the Peronospora Ferrani.*—If two cubic centimètres of a cultivation taken at a certain point of its morphological evolution be injected under the skin of a guinea-pig, the site of injection becomes hot, swollen, and painful. The general temperature at first rises, but soon falls to 4 or 6 degrees below the normal. After an hour the guinea-pig seems ill, and refuses its food; its coat becomes rough, it utters plaintive cries, especially when touched at the swollen part; or, if obliged to move, it trembles, and at last a greenish liquid flows from its mouth: it falls on its side, and death occurs with slight convulsive movements of the limbs. The necropsy reveals a local inflammation, and the blood contains greenish granulations like those contained in the oöspheres; if these be cultivated, the forms described above are obtained. Injection of the cultivation-liquid into the intestines of guinea-pigs gives rise to no symptoms. If the injection do not cause the death of the animal, no further injection has any effect; it has become protected. In man, injection causes slight redness and swelling at the site of operation. The local temperature is raised, and movements become painful. These symptoms last about six hours, and the next day no inconvenience is felt. Re-inoculation has no effect.

Dr. Duhoureau has received from Dr. Ferran a long explanatory letter, modifying and correcting some of the published statements concerning his process. In the first place, he states that the microbe is colourless in all its phases of existence, the greenish colour noticed being due to chromatic error in the microscope and to artificial light. With regard to the origin of the muriform bodies, he says that when the entangled mass of spirilla which are precipitated at the bottom of the funnel, caused by the comma-bacillus in tubes of gelatine, is examined, one sees in certain spirilla nodosities or granulations like true spores. These are the ones which, under proper cultivation, become spiral-producing muriform bodies. The projection of the filament of protoplasm from these bodies anyone can see who patiently watches. The filament is extremely fine, but quickly grows, and the spirillum forms under the eye of the observer. The spirilla proceeding from the muriform bodies have fine and close spirals, while in successive generations derived from scissiparity in liquid media, the filaments are long and flexuous, the spirals not being so evident. Starting from the spirillum or filament, a sort of morphological dichotomy is established. 1. On one side arises the spore now described. 2. On the other, in the spirillum or filament appears the oögonium, becoming what has hitherto been called the oösphere, but which is better called the 'pollinide.' In the protoplasm of the oösphere, a process not well marked of segmentation is established, which sometimes produces spherules in artificial liquid media. At first it was thought that the muriform bodies proceeded from this protoplasm; now their true origin is more clearly seen; but, on the other hand, the rôle of the oösphere becomes more obscure.

Dr. Ferran next proceeds to describe his method of cultivation. The liquid medium employed is mutton or beef broth prepared according to the formula of P. Miquel, no peptone or Liebig's extract is added, and it is made slightly alkaline. It is sterilised by successive boilings in a small matrass. A straight tube, plugged with sterilised cotton-wool, enters the matrass, and through the cotton-wool a capillary tube carrying the infective material is insinuated when the cultivation is to be inoculated. The capillary tubes have a small dilatation in the middle, and are carefully sterilised and sealed at both ends, the ends being broken at the moment of using only. For a matrass holding 30 or 40 cubic centimètres of broth, the contents of one of these capillary tubes is sufficient. The sowing effected, the matrass is kept at 37°C. If incubation be too prolonged, the fissiparous generation of spirilla being very active, the broth is exhausted, and the appearance of the other forms of the thallophyte becomes impossible. Incubation must be therefore arrested the moment the cultivation loses its transparency. It must be then taken from the stove and kept at from 15 to 18°C. After 48 hours, oögonia and oöspheres are found; little spherules like cocci are also present, probably proceeding from the filaments and spirilla sown. The formation of oögonia exhausts the nutritive properties of the broth, and it is necessary to add further nourishment to facilitate the evolution of the muriform bodies. This 'manure' is composed of a mixture of broth and pig's bile (100 to 20) carefully sterilised. This is added, and the matrass again left at from 15 to 18° C. These transformations are sometimes seen in tubes of nutritive gelatine, which is thus prepared: broth, 500 cubic centimètres; gelatine Enrich, 35 grammes; bile, 50 cubic centimetres. Dissolve in the water-bath, make alkaline, leave it in the bath for 30 minutes and filter. Sterilise by successive boilings. Tubes are only used in which the gelatine at the end of a month is free from all growths. In liquid cultivations the microbe acidifies the medium, and its virulence becomes spontaneously attenuated. No acidification takes place in gelatine. One cubic centimètre given by hypodermic injection may, if the cultivation be virulent, occasion in man grave general symptoms; great prostration, fever followed by cold, nausea, and even vomiting, also abundant diuresis in some cases. In other individuals the same dose produces slight fever, more or less prostration, and local symptoms. The blood in these cases contains innumerable cocci endowed with Brownian movements, but when the effects of the injection remain localised these are not seen. Guinea-pigs offer more resistance than man. A few hours after inoculation, a drop of their blood sown in broth gives rise to spirilla. The blood contains only small cocci, which are those probably which in cultivations pass to the stage of muriform bodies and give rise to spirilla. From the commencement of choleraic diarrhœa, one finds oögonia and muriform bodies in the dejections. Dr. Ferran concludes his letter with the important remark that, to study the evolution of the microbe, one must not make dry and coloured preparations. It is indispensable that the cultivation-liquid should be examined without preparation of any sort.

G. D'Arcy Adams, M.D.

Article 4218.

THE CHOLERIGENIC MICRO-ORGANISM OF FERRAN.

The Royal Academy of Medicine and Surgery of Barcelona has published a report on the memorial presented by Dr. Ferran to the municipality (*El Siglo Medico*, April 26, 1885). They arrive at the following conclusions. 1. The micro-organism described by Finkler and Prior as found in sporadic cholera is not the same found by Koch in Asiatic cholera. 2. The comma-bacillus of Koch only represents one phase of a micro-organism whose morphological evolution is complex. 3. The comma-bacillus of Ferran, obtained in Marseilles and cultivated in Tortosa and Barcelona, is identical in all respects with that of Koch, as is also the bacillus described by Van Ermengen. 4. The elaborate and conscientious studies of Ferran, confirmed by the commission, prove without doubt that this parasite includes the following phases:—spiral filamentous thallus, appearance of spores in the thallus, their escape, growth, increasing heterogeneity of their contents, conversion into a mulberry-shaped body, escape of protoplasm, its condensation and formation of a spiral, which is the thallus of new vegetations. 5. In certain phases of the cultivation, so-called oögonia and oöspheres constantly appear. The part played by these demands further study, as do other less constant forms. 6. The injections of the cultivation-liquids cause a marked pathological action, frequently and even rapidly fatal; and, since this results from the inoculation of cholera-products, and from the phenomena observed during life and after death, its analogy with cholera morbus must be admitted. 7. In this infection, obtained by hypodermic injection, the gastro-intestinal disturbances and the symptoms due to them are naturally absent, while it presents the characteristics of rapid infection, with marked algidity, convulsive movements, apparently painful, and cyanosis, in guinea-pigs. 8. In the blood is noticed a constant micro-globulism, varying with the dose injected; it also contains cocci and discs of various sizes. This blood reproduces in broth and nutritive gelatine, either in tubes or in plates, all the forms characterising the micro-organism; and these are again transmissible. 9. In man all the phenomena determined by hypodermic injection occur, but, as smaller quantities of the virus can only be injected, the symptoms are milder. 10. These facts have been in great part corroborated by Van Ermengen. 11. The facts described bring scientific conviction that the micro-organism producing cholera has been discovered and described. 12. The classification of the parasite is not yet possible to determine; more studies of the forms occurring in cultivations are necessary. 13. When the dose is diminished, or if the energy of the cultivation be attenuated by time or by the action of oxygen, injections in guinea-pigs cause slight disturbance, and leave them protected from the effects of larger doses and of more virulent cultivations. 14. In man, this protection is as evident as in animals. 15. These deductions lead to the hope that the means of avoiding cholera have really been found, but this cannot be affirmed without the test of an epidemic. 16. Various substances markedly poisonous to man do not impede the evolution of the microbe, and Calabarin even greatly favours it.

G. D'Arcy Adams, M.D.

Article 4219.

SIMMS ON PISCIVOROUS PLANTS.

Mr. G. E. Simms (in a paper quoted in *Der Fortschritt*, No. 4, Feb. 20, 1885) not long ago, communicated his observations, that the Greater Bladderwort (Utricularia vulgaris), an aquatic plant common in ponds and water-courses, well known for its bladders serving as insect traps, likewise sucks in and probably digests young recently hatched fish. These tiny animals generally insert the head into the bladders, leaving only the tail outside the orifices. Mr. Simms quite recently adds further information on this interesting subject, pointing out the predacious habits of the plant. These plants, he remarks, are always found, except when carried away by the wind, in the darkest places of the pond; they are generally concealed beneath other aquatic plants, hidden from the light. When exposed to the full influence of daylight, the valves, which close the orifices of the bladders, lose their elasticity, and the latter soon drop off. Only in the dark the bladderwort will keep in healthy condition. It is a most dangerous neighbour to young fish.

An eminent pisciculturist lately expressed his astonishment, that when keeping young axolotls in an aquarium with bladderworts, these curious amphibious Mexican salamanders (Siredon pisciformis, which however recently has been recognised as the tadpole of a newt: Amblystoma) always disappeared; the true cause of this may now be fairly explained.

The Utricularia is equally fatal for young fry as aquatic birds and others for larger fish, as it generally grows at such places where the spawn is deposited, and where the fry, after being hatched, has to remain for some time in shallow water, when great quantities must be killed by the plants.

Mr. Simms believes that the leaves are poisonous to fish, having observed that the greater number of young roach, which he had placed in an aquarium containing bladderwort, were after a short time found lying dead on the leaves. He also points out that the bristles, which invest the orifices of the bladders, are hooked like the awns of barley, by which the captured fish, in its efforts to escape, is more and more propelled into the bladder. Whether the head or the tail of the fish be taken hold of by the bristles, he will not be able to extricate himself. So firm is the hold, that Mr. Simms only once observed an insect freeing itself.

Mr. Simms always found the bladderworts thickly covered with Confervæ (Algæ) inhabited by numberless insects. If these plants really digest animal food, which, although not yet quite certain, is very probable, they must, under such circumstances, find rich supply. When, however, Mr. Simms, from the fact that the Utricularia has no roots, draws the conclusion that it is limited to animal food for its nutrition, he may be reminded that there are, besides the Algæ, many other rootless aquatic plants, which have never yet been observed to be carnivorous.

F. A. Junker, M.D.

Article 4220.

SEIFERT ON CAFFEINE IN CARDIAC DISEASE.*

Whilst caffeine in England and in France is employed like digitalis as a vascular sedative and as a diuretic, its use in Germany has almost entirely been restricted to the treatment of megrim. Dr. O. Seifert, therefore, tested its therapeutic value in other affections, especially in cardiac disease.

The physiological properties of caffeine are well known. In large doses it paralyses the nervous centres and the heart; in medium doses, when taken for a longer time, it first increases the reflex irritability, and finally causes muscular rigidity, most likely from its immediate chemical action on the myosine.

When employed in moderate doses, caffeine will stimulate the heart's action by directly affecting this organ and by causing contraction of the arteries. The pressure of the blood, the frequency of the pulse, and the peristaltic movements of the bowels, will be increased. In proportion with the more copious quantity of the urine, more urea and carbonic acid will be eliminated. All these symptoms, however, will disappear in a comparatively short time, the caffeine rapidly passing into the urine.

Riegél's observations agree with those of Jaccoud, that caffeine, given in daily doses of 25 centigrammes to one gramme (4 to 16 grains), regulates, like digitalis, the movements of the heart and acts as a diuretic, fortifying the heart, quieting its action, and increasing the pressure of the blood.

Dr. O. Seifert employed citrate of caffeine in seven cases of heart-disease in the stage of functional disturbance; in two cases there was, besides the affection, also chronic nephritis with extensive œdema.

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* *Der Fortschritt*, April 5, 1885, No. 7, and *Deutsche Med Zeitung*.

One to two grammes (15 grains to half a drachm) per diem of the medicine were given in small—best in hourly—doses during the twenty-four hours, in several cases alternately with digitalis and squills. Dr. O. Seifert's observations entirely bear out those published by Riegél in the *Transactions of the third Medical Congress*, 1884 (*Vorhandlungen der III. Congresses für innere Medicin*, 1884) according to which caffeine acts by regulating the cardiac movements and as a diuretic, similar to digitalis, possessing some advantages over the latter; in other respects, however, being less effective. Its superiority to digitalis consists, when it is employed in proper doses, in acting more rapidly by stimulating the power of the heart, by regulating and quieting its movements and by augmenting the diuresis, besides never causing convulsions, as digitalis is occasionally apt to do, and not having an accumulating effect. Its principal drawback is that, from its rapid elimination through the urine, its beneficial effect on the heart and kidneys will, in most cases, be only temporary. Sometimes, however, after having removed the functional disturbance, the effect of caffeine may continue as long as that of digitalis. Neither in simple congestion of the kidneys, nor in chronic nephritis, when the latter formed a complication of organic disease of the heart, did increased diuresis take place. Very perceptible is its beneficial effect on the general condition of the patient; palpitation, dyspnœa, and sleeplessness are, in most cases, rapidly relieved, although the latter may in some instances become worse from the use of caffeine.

Like other cardiac remedies, also, caffeine occasionally brings on troublesome effects, viz., giddiness, nausea, &c.; which, however, will rapidly disappear, and will not interfere with the continued use of this medicine. F. A. JUNKER, M.D.

ARTICLE 4221.

HOFMANN ON CONIÏN-SALTS.*

Der Fortschritt, April 5, 1885, No. 7, gives an analysis of Professor Hofmann's recent investigations on coniïn salts.

The author, having shown that the correct composition of conia or coniïn is $C_8H_{17}N$, and not, as hitherto accepted, $C_8H_{15}N$, and that at the same time the formula of conhydrine, $C_8H_{17}NO$, is correct, says the question arose how this fact may accord with Wertheim's discovery, that conhydrine, by the action of anhydrous phosphoric acid (P_2O_5), is converted into coniïn. Hofmann therefore repeated Wertheim's experiments, first using likewise P_2O_5, and afterwards also hydrochloric acid for the decomposition of conhydrine; and he found that the breaking up of the latter actually takes place in the manner as demonstrated by Wertheim—$C_8H_{17}NO = C_8H_{15}N + H_2O$. The product, however, formed by the separation of water from conhydrine is not coniïn itself, but a compound very similar to it, of at least two, likely of more, bases, for which Hofmann proposes the term 'coniceïne.'

The decomposition of conhydrine by the action of fuming hydrochloric acid requires about four hours, at a temperature of 220° C. (392° F.). The oleaginous layer, after having been separated by an alkali, is distilled by steam. This fluid is dehydrated by caustic potash, and again distilled at 155°–157° C. (311°–314°·6 F.). By saturating the oil, which has passed over, with hydrochloric acid, two salts are formed, one of which is deliquescent, the other solid. These bases can be separated by converting them into their corresponding picrates, one of which is but slightly, the other, on the contrary, very readily, soluble in cold alcohol.

The base contained in the slightly soluble picrate is called by Hofmann '*α coniceïne*.' Its formula is $C_8H_{15}N$. It represents a colourless fluid, boiling at 158°–159° C. (316°·4–318°·2 F.), which is not affected by the air, and dissolves with great difficulty in water. Its smell is similar to that of coniïn, to which base also its physiological properties are analogous. The α coniceïne is a tertiary base, forming, with iodide of methyl, an iodide $C_8H_{15}CH_8J$, which combines with argentic oxide to form a very alkaline hydrate.

By treating conhydrine with concentrated hydriodic acid, α coniceïne can likewise be obtained, whereby a hydriodide of an iodic base, $C_8H_{16}JN,HJ$, is formed, which, by boiling with caustic soda, is converted into α coniceïne: $C_8H_{16}JN, HJ + 2NaOH = C_8H_{15}N + 2H_2O + 2NaJ$.

Moreover, α coniceïne can be produced from coniïn. One molecule of hydrochlorate of coniïn with one molecule of bromine and some alkali, form a bromide, $C_8H_{16}NBr$, which, by proper treatment with sulphuric acid, breaks up into hydrobromic acid and into α coniceïne.

Further, α coniceïne can be reduced to coniïn by treating it with a great excess of hydriodic acid and a little phosphorus at 200° C. (392° F.) during several hours, whereby coniïn, but in a very minute quantity, is obtained. Octyl* also at the same time being formed by this process, Professor Hofmann tried the reduction of coniïn to octyl, in which he succeeded by heating the coniïn with fuming hydriodic acid to about 300° C. (572° F.) during eight to ten hours.

The alcoholic concentrated solution of the picrate of α coniceïne contains, besides the picrates of several bases, the principal of which, β coniceïne, Hofmann isolated. It forms delicate crystalline needles, which in water but slightly, in alcohol and ether readily, dissolve, and melt at 41° C. (105°·8 F.) Their smell resembles that of coniïn. Notwithstanding its high boiling-point, which is at 168° C. (334°·4 F.), this salt is extremely volatile. The physiological effects of β coniceïne are similar to, but much weaker than, those of the α isomeric salt. The β coniceïne is a secondary base.

The above-mentioned combination, $C_8H_{16}JN,HJ$, which forms by heating conhydrine with four times its weight of hydriodic acid and some phosphorus to a temperature not exceeding 150° C. (302° F.), will be reduced by tin and hydrochloric acid to pure coniïn. It therefore represents the hydriodide of an iodide of conine, from which, by treating it with caustic soda, α coniceïne, and at the same time also β coniceïne, are obtained. By passing steam through a mixture of the hydriodide, with an excess of caustic soda, principally α coniceïne will be produced, whereas a greater proportion of β coniceïne will be the result of the distillation of the desiccated iodide with quicklime. F. A. JUNKER, M.D.

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* 'Zur Kenntniss der Coniïn-Gruppe,' von A. W. Hofmann (*Die Chem. Gesellschaft Berlin's.* [the Chemical Society of Berlin], 1885: 18: 5).

* Octyl or octan (capryl), C_8H_{17}, is the eighth alcohol-radicle of the series, $C_nH_{2n} + 1$.

Article 4222.

SMIRNOFF ON HYPODERMIC INJECTIONS OF QUININE IN MALARIAL FEVER.

The high price of quinine induced Dr. A. Smirnoff, of the 23rd Dragoon Regt., in Soroky, Bessarabian Government (*Voenno-Sanitarnoie Delo*, No. 14, 1885), to give an extensive trial to a long list of various substitutes for the classical antimalarial drug. Carbolic acid, salicylic acid, burnt alum, tincture of iodine, tincture of eucalyptus, oil of eucalyptus, oil of turpentine, lemons, and faradisation of the spleen, all were resorted to successively, and all of them gave uniformly negative results. With deep regret in regard to waste of time, the author returned to the exclusive use of quinine, striving at the same time to find out a most economical method of freeing the soldier from severe Bessarabian fever in that way. Dr. Smirnoff thinks that he succeeded to find something like the desideratum in the shape of hypodermic injection of hydrochlorate of quinine; the method which is at present practised by the author to the exclusion of all other means. He injects six grains of the hydrochlorate (dissolved in half-a-drachm of distilled water) at a time, by means of Lewin's syringe, into the subcutaneous cellular tissue below the scapular region. In the course of 1884 he successfully treated in that way 470 malarial soldiers, the whole number of injections being 1,179; that is, a case required, in average, 2·5 injections; the greatest number of the latter in an individual case was 9.

Relapse after the subcutaneous treatment occurred decidedly more rarely than after the internal administration of quinine.

That the hypodermic method is much cheaper than the internal one, may be gathered from the following comparison. To cure 178 patients treated by the internal use of the alkaloid, the author used 7,019 grains of sulphate of quinine, or 39·5 grains per head. To cure 470 patients treated hypodermically, he used 7,074 grains of muriate of quinine. Taking (with Toropoff) an eight-grain dose of the hydrochlorate as equivalent to a ten-grain dose of the sulphate, we have an average dose of 19 grains of quinine in the case of the hypodermic treatment against that of 39·5 grains in the case of the internal administration. The author never saw the appearance of any unpleasant phenomena at the spot of the injection (such as abscesses, sloughing, intense irritation). Pain was always trifling and of short duration. In some of the patients with very sensitive skin there occurred bright redness, about 3 or 4 centimètres in diameter, but it quickly disappeared spontaneously. As to the essential advantages of the hypodermic method (besides cheapness), the author points to its applicability at any stage of the disease, and to the sure and safe assimilation by the patient's system of every particle of the drug used.

[In the *Vratch. Vedom.*, No. 345, p. 541, Dr. A. Mërnyi records his most satisfactory results obtained from the treatment of severe Dobrudjan malarial fevers by subcutaneous injections of three-quarters of a grain of the hydrochlorate of quinine two or three hours before the expected paroxysm. Paroxysms usually disappeared after one injection. Relapses, however, occurred very often. In one case, an enormous abscess developed at the spot of puncture. In the *Voenno-Meditz. Jurnal*, June 1878, p. 101, Dr. Dobrokhotoff writes that he treated 101 cases of severe Danubian malarial fever by hypodermic injections of half a grain of quinine, and obtained cure in 88 cases, recovery usually ensuing after four or six injections. According to his calculation, the hypodermic method is ten times cheaper comparatively with the internal administration. In five cases local ulceration followed. Dr. J. Grünberg, in the *Voenno-Meditz. Jurnal*, March 1878, p. 151, also speaks very favourably of the hypodermic injections, for which he used Drygin's double salt (or 'urea et chininum muriaticum'), in doses of 6 or 7 grains at a time. In the *Moskovskaia Meditz. Gaz.*, No. 13, 1872, Dr. Gradzicki recommends subcutaneous injections of lactate of quinine. On the other hand, Dr. N. Toropoff argues that the hypodermic method of administration of quinine cannot possibly replace altogether the internal use of the drug, since the former causes local pain, induration, suppuration, sloughing, requires much time, and, after all, is not cheaper than the latter. (*See* his work on *Quinine and its Use in Malarial Fevers*, St. Petersburg, 1871, p. 200.) The following Russian authors have also written on the subcutaneous use of quinine in intermittent fever:—Abaza, Millardë, Gorbatchevsky, Konopleff, Rucker, Schönfeld, Finkelstein (900 cases), Blacher (100 cases), Zakharoff, Kostenko, Keldysh (467 cases), Kikin, Gradzicki, Feigin, Goralevitch, Schulz, Albrecht, Steinberg, Savarovsky, Jliin, Libau.—*Rep.*]

V. Idelson, M.D.

Article 4223.

VON STEIN ON CUCAIN IN DISEASES OF THE THROAT, NOSE, AND EAR.

In the *Meditz. Obozrenie*, Fasc. xxiii., 1884, p. 1023, Dr. Stan. von Stein, of Moscow, gives a detailed account of his experience in the use of cucain in faucial, pharyngeal, laryngeal, nasal, and aural cases. As a rule, either a 5 per cent. vaseline ointment with pure cucain, or a 5 per cent. aqueous solution of hydrochlorate of cucain, was used; the former being preferred by the author in all pharyngeal and laryngeal cases, since the ointment remains longer in contact with the mucous membrane, allows a more economical production of anæsthesia, and possesses a less bitter taste.

Throat Cases.—Under the influence of cucain the faucial, pharyngeal, and laryngeal mucous membrane soon becomes pale and markedly anæmic, anæmia being especially pronounced in the uvula. There appears at first a sensation of coolness, and then that of 'the mouth and pharynx being covered with cotton-wool.' In the beginning, an increased secretion of mucus is usually observed, especially when a solution of the hydrochlorate is employed, which solution simultaneously produces a styptic sensation. Respiration remains unmolested, but deglutition becomes somewhat difficult. The larynx and its neighbourhood look as bloodless 'as if they were made of wax.' The vocal cords partly lose their tone. Introduction of a probe does not produce cough, though it causes muscular contractions. Anæsthesia is produced most readily in children and anæmic persons; it ensues more slowly in plethoric subjects and in patients affected with acute diseases. To test the value of cucain as a remedy for *acute laryngitis*, the author produced the latter in himself by repeated painting his larynx with a strong solution of nitrate of silver, and on the next day three times applied a 5 per cent. ointment. All symptoms (hoarseness, tickling sensation, difficult speaking, painful cough, painful deglutition, discharge of glairy viscid secretion) gradually improved, and, on the fourth day, disappeared altogether, in spite of out-of-doors movement, and general absence of any hygienic precautions. Identical results were obtained from the cucain treatment in two other cases of acute laryngitis. Hence the author concludes that 'cucain presents a good means for relieving all symptoms of simple acute laryngeal inflammation.' It was otherwise in two cases of *chronic catarrhal laryngitis*, in which a five days' use of cucain gave negative results, except some improvement in subjective symptoms. Most gratifying results were gained in three cases of *tuberculous laryngitis* in phthisical patients, where the cucain ointment was applied locally, by means of a pencil, before meals or paroxysms of pain, and invariably in a few minutes produced complete anæsthesia, allowing to eat and breathe freely and comfortably. In a case given by the author in detail for the sake of illustration, eight days' use of cucain wrought a striking change indeed both in the local and in the general state of the patient: the appetite returned, obstinate constipation disappeared, the excrements acquired normal consistence, night-sweats ceased to occur, and the pulse greatly improved. The author made the observation that cucain acts more rapidly and more completely in those cases of tuberculous laryngitis where ulcers are present; in cases of simple tuberculosis of the arytenoid cartilages, relief of symptoms is more temporary and less complete. Like Professor V. K. Anrep (*see* LONDON MEDICAL RECORD, January 1885, p. 9), and on the like grounds, Dr. Stein expresses his belief that in course of time cucain will entirely replace morphia in cases of laryngeal disease associated with great irritability and pain. In a case of follicular angina, the application of large quantities of cucain entirely failed to relieve pain. In a case of small polypus of the right vocal cord, the removal could be effected only in two sittings; for, in spite of repeated paintings with a 5 per cent. solution of cucain, spasmodic contraction of the laryngeal muscles greatly interfered with the operation, though cough and pain were absent.

Nasal Cases.—The nasal mucous membrane being painted with cucain rapidly becomes pale and anæsthetic, the anæsthesia here lasting longer in the larynx or pharynx. Simultaneously, a profuse increase of mucous secretion is observed. The erectile bodies of the inferior and middle turbinated bodies become collapsed and less 'pasty,' the change being always more pronounced in the anterior parts of the bones. Cucain may be used for producing local anæsthesia in cases of nasal operations; removal of polypi and cauterisation are rendered quite painless. [The author draws attention to an instructive case of a lady in whom he, after due cucainisation, removed by means of a wire-snare a small but firmish polypus from the middle turbinated bone, and subsequently cauterised the base of the new growth. A free hæmorrhage, with syncope, followed, which the author ascribes to extreme bloodlessness of the cucainised part, with non-formation of vascular thrombi.—*Rep.*] It may be used with diagnostic aim for inspection of the nasal cavities when the mucous membrane is swollen; besides, cucain enables to distinguish simple tumefaction of the mucous membrane from hypertrophic rhinitis and polypi which, being painted with the drug, do not manifest any alteration in their shape or bulk. It may also be used with therapeutic objects; *a.* in chronic rhinitis with undue tendency to erection of the turbinated bodies; and, *b.* in acute rhinitis, especially in infants (*see* also Semtchenko's paper in the LONDON MEDICAL RECORD, April 1885, p. 154; and Fronstein's, *ibid.*, May, p. 195), where cure usually ensues on the third or fourth day of the disease, even when the nose is painted only once a day.

Aural Cases.—On instillation of a 1 per cent. or a 5 per cent. solution of cucain into the meatus, there appears a feeling of coolness, which rapidly gives way to sensation of warmth, and even slight burning. The tympanic membrane becomes extremely anæmic, but only partly anæsthetic, the anæsthesia remaining incomplete even after fifteen minutes' presence ot a 5 per cent. solution in the meatus. Cucain proves of use in the following aural cases: 1. in cases of Eustachian catheterisation in over-sensitive people (for producing anæsthesia of the inferior nasal meatus); 2. in cases of rheumatic aural pain; 3. in acute middle otitis, with or without perforation of the tympanic membrane (for relief of pain); 4. in cases of extraction of aural polypi [the author was enabled to perform their removal quite painlessly in two cases.—*Rep.*]; 5. in chronic cases of incomplicated median otitis, in which cucain seems to diminish purulent secretion. Apart from occasional sleeplessness, the author never saw any untoward accessory symptoms from the use of the drug.

V. IDELSON, M.D.

ARTICLE 4224.

MUSSO AND BERGESIO ON THE INFLUENCE OF HYDROTHERAPEUTIC APPLICATIONS ON THE CEREBRAL CIRCULATION IN MAN.*

AN unusual opportunity of making experimental researches on the influence of cold and hot water baths, local and general, on the cerebral circulation in man, fell in the way of the authors. About three years ago, a mason, 50 years of age, had his skull fractured by a brick. There was hernia cerebri; fragments of bone were removed, and in a month the patient left the hospital recovered. Nine months after the injury, when the authors commenced their experiments, the condition of parts was as follows. In the right parieto-occipital region, a little below the superior-posterior angle of the parietal and at two centimètres from the sagittal suture, was a depression in the hairy scalp. This depression was upwards of 6 centimètres in length, and 5 centimètres broad. The greatest depth of it in the erect position was 1·8 centimètres; but the depth varied according to position and to the respiratory movements. Thus, in forced expiration in the horizontal position, or with the head down between the legs, the base of the cicatrix became almost level with the surrounding parts. The opposite happened in deep inspiration in the erect position. The isochronous beats of the heart could be distinctly felt in this depression.

The apparatus for registering the changes in the position of the cicatrix was very simple. A somewhat convex plate of gutta-percha was fitted accurately to the bony margin by an impermeable adhesive substance, so as to form a chamber of air. By means of a glass tube arising from the centre of the gutta-percha, this chamber communicated with a registrating tympanum.

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* *Riv. Sper. di Fren.*, Fasc. i., 1885.

Before relating their own experiments, the authors review the literature of the subject. Schüller made experiments on rabbits touching the effects of baths of various temperatures on the cerebral circulation. These experiments were made with great care, and complicating influences were as much as possible removed. The conclusions arrived at by this observer were these. Cold baths, whether local or general, cause increased afflux of blood to the meningeal vessels, owing to the contraction of the cutaneous blood-vessels. Warm baths have the contrary effect owing to the dilatation of the cutaneous vessels. The movements of the heart and of respiration are only indirectly concerned in these phenomena. The reflex influence of thermic stimuli of the cutaneous nerves on the meningeal circulation is only of secondary importance.

Schüller's experiments, however, do not appear to the authors to show whether the vaso-dilator and vaso-constrictor nerves take part in the phenomena, or whether the phenomena are exclusively due to reflux of blood from the surface, and *vice versâ*. The experiments made by Drs. Musso and Bergesio included the cold bath, the hot bath, pediluvia, and the ice-cap. Great care was taken to secure identical conditions in each set of experiments.

The phenomena due to the cold bath (20° C. = 68° F.) are divided into two periods. The first period lasts only a few minutes. In it there are diminished frequency of the heart's beat, a greater development of the sphygmogram, and increased distance between the lower margin of the paper and the tracing. The second period continues the whole time of the bath, if this be not prolonged beyond thirty minutes. During this second period the slowness of the pulse remains; the distance between the lower margin of the paper and the tracing keeps on increasing (showing increasing volume of brain), and the size of the pulsations diminishes considerably. The explanation of these phenomena has to be considered. The increased size of each heart-beat in the first period may be due either to diminished tone of the arterial walls, or to increased force of the heart's action. The first of these hypotheses—that there is a reflex vasomotor paralysis—is contradicted by Schüller's experiments. The second hypothesis, on the contrary, receives confirmation from the researches of Neumann and Winternitz, who, experimenting on animals, found that peripheral thermal stimulation, not too intense, caused greater force in the beat of the heart. The slowing of the pulse by the cold bath was observed by Galen, and has been confirmed by many modern writers. The common explanation of this phenomenon is that the nuclei of the vagus are reflexly stimulated. Liebig put forward another view. Asp and other experimenters had shown that when there is artificial or spasmodic occlusion of part of the general circulation the tension of the whole arterial system rises with slowing of the pulse; and Liebig considered that the spasm of the cutaneous vessels gave rise in this manner to general increase of tension. The most noteworthy phenomenon, however, is the increased volume of the brain, indicated by the greater distance of the tracing from the lower margin of the paper. This is easily accounted for in two ways. In the first place, there is contraction of the cutaneous vessels, whether owing to reflex action or to direct action of the stimulus on the muscular fibres. In the second place, all parts of the body except the chest and the head are exposed to a greatly increased pressure in the bath. The blood, therefore, driven from the surface goes to all the internal organs, but especially to the head and chest. One point remains to be explained. The only difference that distinguishes the second period from the first is the diminution in the height of the pulsations. To what is it due? It may be due to weakness of the cardiac impulse. A more likely explanation, however, is that the increased endocranial pressure offers a greater resistance to the expansion of the arteries. The condition of the brain, therefore, during the first period is one of increased arterial supply, and probably also of diminished venous outflow. During the second stage there would be venous congestion and relative arterial anæmia.

The warm bath (39° C. = 102° F.) gave rise also to diverse phenomena during the first few minutes, and later. During the first period there was increase of the volume of the brain; during the second period diminution. The character of the tracings shows further that the heart during the first period was beating with increased energy; during the second period with diminished energy. The cerebral anæmia due to the warm bath was found to persist for a considerable time after the bath. This last circumstance is contrary to the experience of Winternitz, who found that the circulation not merely returned to its condition before the bath, but even underwent a modification exactly the opposite of what had taken place in the bath.

The effects of pediluvia, warm or cold, were identical in character, but less in degree than were the effects of general baths of the same temperature. The action of warm pediluvia is summed up as follows. 1. The action of the warm pediluvia on the cerebral circulation in man, although less intense and less rapid, is identical with that of the general warm bath. 2. As in this last, there is observed a first transitory period characterised by diminished vascular tonicity, slowing of the circulation, and venous congestion of the brain. 3. In a later period, which lasts the whole time of the pediluvium, the diminution of vascular tonicity continues, whilst venous congestion takes the place of anæmia, of the brain. 4. The modifications of the second period continue for some time after the pediluvium has ceased, as has been already seen in regard to the general warm bath.

Lastly, the authors made some experiments with a bladder of ice applied to the head. The cerebral circulation was not in any way affected by the application; nor was the general circulation, as a sphygmograph on the arm at the same time showed. This agrees with experiments of Schüller and of Benham. Benham's experiments, however, were not conclusive. The authors think, therefore, that the value of ice to the head as a therapeutical measure depends on its power of abstracting heat. The experiments of Esmarch, Schlikoff, Winternitz, and Frank, are quoted against Ercolani and Vella, to show that the temperature of the deeper parts of the body is affected by the local external temperature.

William R. Huggard, M.D.

ARTICLE 4225.

HUTCHESON ON CHOLERA.

SURGEON-MAJOR HUTCHESON, M.D., has recently published a pamphlet entitled *Cholera, its Cause and Mode of Dissemination.*

The author states that cholera is but another name for an active vital organism, which developes with fearful rapidity wherever, in ignorance and neglect of sanitary law, man has under certain circumstances reared his abode. There are two widely different suppositions regarding the development of the cholera-germ: 1. That it is eminently contagious, and is propagated from man to man; 2. That the cholera-germ is a zymogenic organism and, like the ordinary septic germ, is air-borne, and differs only in the fact that it (the cholera-germ) has limits to its distribution under certain meteorological and other conditions which apply to most ferments. The English school do not agree with Dr. Koch in believing that cholera is a contagious disease, and propagated from man to man. It is now accepted by Dr. George Buchanan and the best medical authorities in England, that cholera is not contagious in the sense that it passes from person to person. Some, however, are in favour of the view that cholera is propagated by means of the discharges of the sick, whereas the view held by an intelligent minority denies the contagiousness of cholera, whether direct or indirect. It is certain that attendants on cholera cases suffer no more than others, and the author gives statistics in support of this fact; he then goes on to state that cholera obeys clearly established and well defined laws in its rise and dissemination, and declines and disappears in such a definite manner, that no amount of acute reasoning can fix any relation between cholera and any directly contagious or seemingly contagious disease. Typical invading cholera has a period of incubation, and it takes from 3 to 5 days to produce a distinct epidemic manifestation, whilst 14 days mark the limit of an advance of a typical epidemic. From statistics it is shown that in an epidemic the maximum death-rate is reached on or about the tenth day after the occurrence of the first deaths.

The following conclusions are drawn up by the author regarding the etiology of this disease. 1. The diffusion of the reproductive elements of a micro-zymogenic organism is the cause of cholera. 2. Like an impalpable poison or miasm, the micro-organism is disseminated far and wide at maturity, under aerial and other influences and agencies. 3. The conditions under which the organism exists and is revitalised are external to man. 4. The cholera micro-organism is engendered in unsanitary conditions of soil, atmosphere, and human existence. 5. The micro-organism acts as a direct poison on the human organism, just as septic germs act on and destroy vital tissues by first interfering with vital function, then ultimately annihilating and destroying all vital activity. 6. Dr. Koch's bacillus is not the cause of cholera, but may be a concomitant of the cholera-organism in being generated in the special organic products of the disease. The history of cholera epidemics in India and elsewhere contains no proof that the disease has a tendency or marked predilection for, and wears out its virulence amongst, a people. It is certain, however, that it has a predilection for all places where unsanitary conditions exist, though the onward movement of an invading matured cholera-virus is usually in a definite direction, irrespectively of such conditions; and such a view involves a theory of its dissemination chiefly by aerial influences. There is no other known medium more likely to favour the distribution of germs, than a dense cloud of aqueous vapour in a warm latitude. The history of the distribution of cholera in India is in many respects in accord with the meteorological record of the monsoon and other natural influences, which prevail with a marked periodicity over the entire country. The author concludes by stating that the cholera-germ can be deprived of its lethal power, before it gains a firm hold on the human constitution, by the administration of a weak mineral acid; and the best remedy to check choleraic diarrhœa is dilute sulphuric acid.

RICHARD NEALE, M.D.

ARTICLE 4226.

WEBER ON THE HYGIENIC AND CLIMATIC TREATMENT OF PULMONARY PHTHISIS.

IN the *Brit. Med. Jour.*, March 1885, pp. 517, 575, 641, and April, p. 688, are published the Croonian Lectures, delivered before the Royal College of Physicians in London by Dr. Hermann Weber. By pulmonary phthisis the author means a chronic disease of the lungs, with consolidation beginning almost always at the apex, having a tendency to caseation, softening, and the formation of cavities, or of fibrous changes; all the changes may occur in the same individual at the same time in different parts of the lungs, or may follow one another at different periods of the disease. These changes are mostly found associated with the tubercle-bacillus, discovered by Koch, and are intimately connected with a state of malnutrition of the whole organism, especially the cells and tissue of the lungs. There is no doubt that the bacillus is intimately connected with phthisis, but the exact relations appear to require further elucidation, as to why it thrives in some persons and not in others; or why it thrives in a person at one time and not at another. It is known that the range of temperature within which the bacillus of tubercle can grow is much more restricted than in the case of some of the other bacilli. Its growth entirely ceases below about 82°F., and above 107°F.; it thrives best at about 98° to 100°F. A further point against the spread of the tubercle-bacillus out of the animal body, is that it does not form spores in the air. When there is any catarrh of the mucous membrane of the bronchi, and especially of the smaller divisions, and when the expiration is imperfectly performed, the bacillus finds a favourable opportunity for its development. The lecturer then shows that many cases of phthisis are certainly curable; and in the *post mortem* room many instances are familiar to everyone of old phthisical cavities having healed. With reference to treatment, it is impossible to restrict ourselves to that of the developed disease, and to pass over the preventive treatment. In many cases this is the only chance, for, when the disease is once established, in some constitutions it runs a rapid course. The poor have far less hope of recovery than the rich; and, contrary to what is the case in many diseases, existing hospitals cannot put the poor on a par with the rich in the question of the treatment of phthisis. That phthisis is capable of being transmitted from patient to patient is an accepted fact, in the author's mind, and numerous precautions are laid down with reference to the manner in which persons suffering from the disease should behave when living amongst those either with or without hereditary tendencies.

The second lecture commences with the curative treatment of phthisis. This subject is divided under five headings: 1. Diet; 2. Air and ventilation; 3. Exercise; 4. Management of skin, clothing, &c.; 5. Climate. Food should be taken in small quantities and often, and the appetite should be humoured as much as possible; milk is the most important article. Fresh air, good ventilation, and healthy exercise without fatigue, are essential. With regard to climate, the most essential feature is the purity of the air from floating matter. A soothing climate is not so good as a tonic one; it should allow the patient to remain in the open air, and at the same time enable him to take exercise and to gain an appetite. The author speaks very strongly on the use of alcohol by phthisical patients, and is convinced that in health alcohol is rarely necessary, but that in phthisis, especially in the febrile stage, it is of the greatest use, as long as the kidneys are sound.

The third lecture deals with the effects of climate, and commences with remarks on the beneficial results produced by the dry cold of the Alps in winter on phthisical patients. Altitude climates are recommended in hereditary and acquired tendency to phthisis, but in advanced or complicated cases no benefit is derived from them. After mentioning several health-resorts, the author concludes by remarking that the climate of several places in Great Britain is good for the prevention of the disease, but not for developed cases. The health-resorts on the southern coast lack the necessary arrangements required to render them suitable for consumptives; and Dr. Weber urges the medical profession to use their influence in securing the erection of well-arranged houses with suitable balconies, verandahs, covered walks, seats, &c., and with shelters from cold winds, so that those who cannot afford a journey abroad may reap the full benefit derivable from our own climate.

RICHARD NEALE, M.D.

ARTICLE 4227.

LUCAS ON COLLES'S FRACTURE.*

MR. LUCAS gives in the *Guy's Hospital Reports* vol. xlii., an able and practical paper on this common fracture of the radius. He shows, from a careful reference to museum specimens and from recent dissections which he has been fortunate enough to obtain, that the fracture is usually situated from a quarter of an inch to one inch above the articular surface, and the cause is usually a fall on the outstretched hand. The direction of the fracture is generally either transverse or obliquely directed from below backwards and upwards, and from within outwards and upwards. Not rarely the lower fragment is comminuted, and in only exceptional cases the fracture may be oblique from behind forwards and upwards. Accompanying the fracture, there is usually either a fracture of the styloid process of the ulna or a tear of the internal lateral ligament of the wrist-joint, and, in addition, frequently a rupture of the triangular fibro-cartilage, with such damage to the lower radio-ulnar ligaments as to allow the end of the ulna to be moved more freely than is normal.

The injury gives rise to three prominences; 1. a dorsal elevation most prominent on the radial side, due to the backward displacement of the articular end of the lower fragment, together with the carpus and base of the metacarpus; 2. an anterior rounded prominence, extending from the edge of the annular ligament upwards for about three inches, caused by the fractured ends pressing forward the tendons, together with effusion of blood or serum into and among the sheaths; 3. a prominence on the inner side due to the projection of the lower extremity of the ulna.

There is a depression on the posterior and outer aspect of the forearm, commencing abruptly above the dorsal prominence, and fading away on the radial border due to the displacement of the fractured ends forwards and inwards. Owing to the depression of the radial border of the forearm and the prominence of the lower end of the ulna, the hand presents the appearance of abduction. The movements of pronation and supination are lost. Pain is felt at the seat of fracture, and on the inner side of the wrist and hand. Pain in the latter situation is increased by pressure on or below the projecting end of the ulna, and is due to stretching of the dorsal branch of the ulnar nerve, as he shows by dissection of an old case of fracture, where the nerve was stretched like a bowstring by the projecting ulna.

Crepitus is rarely obtained when examination of the fracture is made in the usual way, by attempting to move one fragment on the face of the other; and the explanation may be twofold. The fracture may be impacted, or the muscles passing through the posterior annular ligament may so fix the posterior edges of the fracture, that only a slight hinge-like movement can be obtained, which is insufficient to produce crepitus.

On grasping the hand of the patient and making free extension, the deformity may be made to disappear; and if at the same time pressure be put on the radius at the seat of fracture, a sense of yielding and sometimes crepitus will be felt; on releasing the hand, the deformity will recur.

The chief displacement is of the lower fragment, which becomes rotated on a transverse axis, so that its articular surface, instead of looking downwards and slightly forwards, is directed downwards and backwards; and to a less extent on an antero-posterior axis, so that the articular surface is inclined somewhat outwards instead of inwards, the upper fragment very usually somewhat anterior to the lower. The radius is shortened as a whole, and the anterior surface becomes longer than the posterior. The hand follows the shortened radius, and is displaced outwards. When the fracture is caused by falls from a height, the lower fragment is often comminuted. In this case, the most regular fragment is one cut off by a fissure commencing in the ulnar facet, and either breaking out on the dorsum in the groove for the common extensor, or reaching to that of the radial extensors. The power of flexion at the wrist in the joint between the first and second rows of carpal bones is greatly increased as time goes on.

There is a marked analogy between this fracture and Pott's fracture at the ankle. In both, there is fracture with partial dislocation. In the lower extremity the fibula is fractured, the foot displaced outwards, and the inner malleolus fractured or the internal lateral ligament ruptured. In Colles's fracture, the radius is fractured and the hand displaced outwards, and the ulnar styloid fractured, with ligaments torn.

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* *Guy's Hospital Reports*, vol. xlii.

Mr. Lucas's description of this fracture is, to our mind, the clearest and best we have seen, and deserves to be incorporated in those surgical text-books, which value accuracy with simplicity, and at the same time wish to make a student think for himself. W. W. WAGSTAFFE.

ARTICLE 4228.

ANOTHER GHEEL.

MOST people read in psychological lore have heard enough of Gheel, the city of the simple. We must bear up as well as we can under the intelligence that there is to be another Gheel to be set up at Lierneux, in the province of Liege.

Here is a translation of the passage in the *Chroniques des Annales Médico-Psychologiques*, No. 2, 1885, announcing this new creation. A royal order, dated February 11, 1885, inserted in the *Moniteur Belge*, February 13, confirms the resolution made during the last session of the provincial council of Liege. The reasons for it are thus explained. 'At Gheel, where the Flemish language is almost exclusively used, insane persons, coming from the Walloon Provinces, are naturally deprived of intercourse which the understanding of a common language could only create. This makes their position very painful in spite of all the kind attentions with which they are surrounded.

'The creation of a colony, in a French-speaking commune, where the insane from the Walloon Provinces will have the use of their native language, with manners and customs conformable to those in which they were brought up, would be a great benefit. Already, about thirty insane persons have been sent to the commune of Lierneux, where they have not been the occasion of any inconvenience.'

This has been followed by a communication (*Moniteur Belge*, March 1) explaining that the creation of the new colony, above all, aims at remedying the overcrowding produced in the asylums for insane properly so called, by the increasing number of chronic and incurable cases and the impossibility of disposing of them in a number of private dwellings so as to make room enough for the acute cases which require an active treatment. 'This intention,' adds the writer in the *Annales*, M. A. Foville, 'is excellent, and it is to be hoped that it will be realised.'

In connection with this subject, attention may be recalled to a little work by Dr. G. A. Tucker, of which an analysis was given in the LONDON MEDICAL RECORD for June 16, 1884.

W. W. IRELAND, M.D.

ARTICLE 4229.

THE BOSTON MIND-CURE AND THE INTERNATIONAL FAITH-HEALING CONFERENCE.

IT is America that sends us our storms. We learn through the Atlantic cable that a gale is going to strike some parts of our coasts at such a date, and it generally comes, sometimes with the force of a breeze which blows off a hat or turns an umbrella inside out, sometimes with all the fury of a hurricane. In the present case we have got what has been styled a 'psychic storm.' As we learn from a New York paper, a new phase of wisdom has been vouchsafed to Boston—the science of mental healing. Nothing that originates in Boston is less than a science or an art. Wonderful cures are stated to have been made by these mental healers. Cases are cited by the hundred of alleged cures of paralysis, cancer, tumour, consumption, rheumatism, scarlet fever, spinal complaints, and nervous disorders. We are told that clergymen of all denominations are seriously considering how to deal with what they regard as the most dangerous innovation that has threatened the Christian Church for many years. A prominent Baptist clergyman, who has studied the books of the Christian scientists, and talked with all the leaders, pronounces their creed a mixture of Pantheism and Buddhism. This is said to be attracting hundreds of young ladies. The young men of Boston will naturally take to Spinoza and con the sacred texts of Pali literature; but our readers will probably be more interested in the therapeutic aspects of this new heterodoxy. In our fear lest we should mistake its leading tenets, we reproduce a passage from a New York paper describing 'a familiar Boston parlour scene; two ladies sit a little way apart in Quaker-meeting silence for perhaps twenty minutes. The face of one is as hotly flushed as if she had been indulging in violent exercise, physical instead of mental. The other, the patient, apparently dozes in her chair. Externally, this is all that constitutes a mind-cure treatment, to which hundreds hereabouts are daily submitting. The fundamental idea that underlies the system of mental healing is, that there is no such thing as sickness. Disease, say the mental healers, is an error of the mind, the result of fear. This startling hypothesis entails some very strange and absurd conclusions. The leader of one of the factions, for there are several in sharp rivalry one with another, gives these instructions for healing: "Reason in your mind that God made everything good. He is not the author of disease. Therefore, as disease is not a creation it has no existence, but it is merely a delusion of the mind, the effect of fear. Fear is faith inverted and perverted. You are to gain the confidence of your patient; make him tell you the cause of what he thinks is his disease. But with your clearer mind you see that it is not sickness at all. You attain the power of healing by dwelling mentally upon the truth and wisdom of God, and thus the faith of the healer meeting the fear of the patient produces a chemical change in the fluids of the system which results in health."'

We gather from the closing sentence that these new scientists admit that there is a chemical change in the fluids in at least some diseases; but they hold that this may be put right by mental action. What the nature of this mental action is it is difficult to say. Some mental healers hold that poisons would be harmless if the fear of them were removed. Mrs. Mary G. B. Eddy, a leader amongst the mental healers, argues that her husband, who died a few years ago, was murdered by an enemy who 'thought arsenic into him.' Children, they explain, are affected because of unconscious hereditary fear.

'Some operators,' we are informed, 'say they use no will power, but simply keep before their minds an image of perfect health, and let God or the truth work through them. Others exert the will intensely to drag out the disease, as it were, by main force.'

One lady, in treating absent patients, puts a doll into a chair upon which to fix her mind in lieu of the sick person. This recalls the doings of the less scientific witch of past times.

Perhaps it is in relation with this 'psychic storm' in the West that we have had the International Faith-Healing Conference in the Agricultural Hall at Islington. At these interesting meetings, whose proceedings we have studied in the *Daily News*, some persons came forward who generally described themselves as having been given up by the doctors. One man had got rid of an enlargement of the great toe; a woman had a tumour which weighed 20 lbs., which occasioned her intense pain. She was now perfectly well, though it was not explained what became of the tumour.

In commenting upon these proceedings, it is customary to remark that medical men are not sufficiently aware of, or do not take sufficient advantage of, the healing power of the mind over the body. While still a student of medicine, the present writer felt a great interest in this subject, read a good many books and papers upon it, and hoped to effect some wonderful cures by the exercise of the imagination or will upon pathological processes. Though his medical experience has lain for years among people neither wanting in credulity nor imagination, he found that these mental influences were difficult to direct and treacherous in their action; they did not come when one called on them, and when one needed them most they were sure to be absent. Any respectable practitioner who goes in largely for this class of cures will soon sink to the level of a charlatan, It is entertaining enough reading a series of these venerable anecdotes which have been quoted and requoted from the pages of Pechlinus through a series of successors, down to the amusing volume of Hack Tuke; but these in reality only record exceptional experiences upon which it would be foolish to rely. Faith in mental cures, or the curative influence of prayer, do not readily ally themselves with the old medicines. It does not do to say, 'If you have only faith enough, calomel will cure you.' Sentimental invalids naturally take to homœopathy, the mind cure, or something else akin to their own speculations. It must have been a sad blight when astrology went out. Scientific medicine is founded on rigid observation, strengthened by statistical inquiry. Naturally the mind-healers and the systematic curers through prayer or faith have a horror of such methods.

The man who proposed that the efficacy of prayer in healing people of their diseases should be tested by exact observation and experiment, was treated as a blasphemer; but if such healing were really the work of God, why should it be irreverent to make it the subject of exact study as much as the growth of a flower or the cultivation of a fungus, which also take place under the same divine Providence? Thus, while we all admit that a patient may advance his cure by a tranquil and cheerful state of mind and by an unwavering confidence in the skill of his physician, and may now and then expect something from the influence of faith in functional nervous disorders, we have little hopes of seeing anything come from these new fantasies, save some needless illustrations of the folly and credulity of human nature.

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SURGERY.

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4241. Keetley.—Buried Sutures. (*Brit. Med. Jour.*, May, p. 880.)

4242. Smyth.—Swallowing a Safety-pin. (*Brit. Med. Jour.*, May, p. 890.)

4243. Duncan.—Ligature of the Right Vertebral Artery of an Epileptic: Recovery. (*Australian Med. Jour.*, March.)

4244. Francis.—The Treatment of Varicose Ulcers by Martin's Bandages and Sponge-grafts. (*Brit. Med. Jour.*, April, p. 836.)

4245. Annandale.—A Case of Bullet-wound of the Abdomen. (*Lancet*, April, p. 740.)

4246. Kocher and Bull.—On Gunshot-wound of the Abdomen. (*Med. Times and Gazette*, April, p. 555.)

4247. Maclean.—The Use of Wire in the Sac in Cases of Aneurysm of the Aorta. (*Brit. Med. Jour.*, May, p. 940.)

4248. Banks.—The Treatment of Gangrenous Intestine in Strangulated Hernia. (*Med. Times and Gaz.*, May, p. 602.)

4249. Hewitt.—A New Method of Administering and Economising Nitrous Oxide Gas. (*Lancet*, May, p. 840.)

4250. Margolin, J.—Artificial Teeth as a Material for Filling Dental Cavities. (*Zübovratchebnyi Vestnik* [*The Odontological Herald*], Feb. 1885, p. 43.)

4251. Kürzakoff, A. P.—Neuralgia Rami Ophthalmici Nervi Trigemini. (*Zübovratchebnyi Vestnik*, March 1885, pp. 39–40.)

4252. Kürzakoff, A. P.—On Antiseptics in Dentistry. (*Zübovratchebnyi Vestnik*, April 1885, pp. 93–94.)

4253. Lubimoff, P.D.—A Case of Tumour Removed by Means of a Caustic. (*Proceedings of the Caucasian Medical Society*, No. 9, 1884, pp. 229–32.)

4254. Minkewicz, J. J.—A Case of Lipomatous Polypus of the Œsophagus. (*Proceedings of the Caucasian Medical Society*, No. 12, 1884, pp. 273–74.)

4255. Kürbanovsky.—On a Case of Bayonet-wound of the Neck. (*Voenno-Sanitarnoie Delo*, No. 11, 1885, p. 111.)

4256. Terner, G.—A Case of Empyema of the Gall-Bladder. (*Khirurgitchesky Vestnik*, Feb. 1885, pp. 77–81.)

4257. Albert.—A Successful Case of Splenectomy. (*Wiener Med. Blätter*, No. 20.)

4258. Albert.—The Treatment of Popliteal Aneurysm. (*Wiener Med. Blätter*, No. 20.)

4259. Gussenbauer.—Resection of the Pylorus. (*Wiener Med. Blätter*, No. 20.)

Art. 4230. *Hodgson on an Easy Method of Cure for Salivary Fistula.*—In the *Lancet*, April 1885, p. 682, Mr. Alfred Hodgson records the case of a man who came to him with a fistula of the parotid duct resulting from a former knife-wound. Numerous attempts were made to close the wound, but without success, until on January 20 Mr. Hodgson passed two needles, threaded on one strong piece of silk, through the fistula into the mouth, on a rather lower level than the external fistulous orifice, piercing the buccal mucous membrane about a quarter of an inch apart. The needles were then removed, and the threads firmly tied and cut off short, thus leaving a ligature enclosing part of the internal wall of the duct, a portion of mucous membrane, and the intervening structures. The edges of the fistula were touched with strong nitric acid in the course of a day or two, so that a scab formed over it, and all the saliva found its way into the mouth. This scab came off a few days later, leaving the skin soundly healed, and the ligature inside cut its way through the mucous membrane by February 11. The result was a complete recovery.

4231. *Mallins on a Case of High Amputation for Gangrene of the Foot, due to Hydatids Plugging the Popliteal Artery.*—In the *Lancet*, April 1885, p. 658, Mr. H. Mallins reports an interesting case of a labourer, aged 74, who enjoyed good health until he reached the age of 67, when, owing to some slight injury, an ulcer formed on the anterior aspect of the middle third of the left leg. This ulcer continued to discharge, in spite of all treatment, for six years; then the patient was admitted into hospital, and, after some months, he was discharged almost well. A few weeks later, however, the left foot began to show signs of disease, and soon gangrene of the great toe showed itself. On January 11 amputation of the limb was performed at the junction of the lower and middle third of the femur. On applying the tourniquet no pulsation of the femoral artery could be detected, and subsequently it was found to be completely plugged by a firm clot. The patient did well for forty-eight hours after the operation; then the temperature began to rise, and, on examining the wound, the anterior flap was found to have commenced to slough. Gangrene of the entire stump rapidly ensued, and the patient died on the fifth day. On examining the amputated limb, the popliteal artery was observed to be much enlarged; and, on dissection, the swelling was found to consist of a mass of hydatid cysts. Mr. Mallins remarks that cases of hydatids being found in the blood-vessels are excessively rare.

4232. *Lee on the Radical Cure of Varicocele.*—In the *Lancet*, April 1885, p. 695, Mr. Henry Lee describes the operation which he has been in the habit of performing for the radical cure of varicocele. The patient is placed under ether, and on the left side of the bed. A portion of the skin of the scrotum is then pulled up and removed by scissors or a knife, the longest diameter of the wound being transverse. The enlarged veins are easily distinguished from the vas deferens, and any large artery must be separated before the operation is continued. A hare-lip needle is then introduced through the wound under some of the veins, and a figure-of-8 ligature tied over the veins. The same thing is done with another needle about half an inch distant. A knife is then introduced underneath the veins, and they are divided. A cautery (not very hot) is then applied to the extremity of the divided veins, and allowed to remain quietly in contact with them for a quarter or half a minute. The tissues adhere firmly to the cautery, if not too hot, and are gently separated by the handle of a scalpel. The needles placed under the veins are now removed, and the edges of the wound brought together by short hare-lip pins, or by a continuous carbolised catgut suture. The wound generally heals in great part by first intention, and the patient can walk about in a week. In cases where the scrotum is not relaxed, the subcutaneous division of the veins answers very well without the removal of any skin.

4233. *Lunn on a Case of Aneurysm of the Abdominal Aorta.*—In the *Brit. Med. Jour.*, April 1885, p. 783, is reported a case, which was under the care of Mr. Lunn and Dr. Benham at the Marylebone infirmary, of a man aged 32, suffering from an aneurysm of the abdominal aorta. The patient was a shoemaker; he had been nine years in the army, and had contracted syphilis five years ago. There was a slight trace of albumen in the urine, but no history of strain or injury. The usual methods of treatment failed to produce any effect on the aneurysm, and the patient was anxious to have something more done. On October 31 he was placed under chloroform, and compression of the abdominal aorta just above, and to the left of, the umbilicus was kept up for 4¾ hours with Carte's tourniquet. The patient felt much better for about a week after the operation, but on November 8 persistent vomiting set in, with feeble rapid pulse; there was no abdominal pain or distension, and the tumour was smaller, harder, and pulsation in it less marked. On November 11, however, he died, and at the necropsy there was found to be gangrene of about two feet of the jejunum. The superior mesenteric artery was completely blocked, but the aneurysm was found to be cured.

4234. *Taylor on the Value of the Diagonal Line in the Diagnosis of Distension of the Gall-bladder.*—In the *Brit. Med. Jour.*, April 1885, p. 737, Mr. J. W. Taylor draws attention to the importance of recognising the diagonal line in the direction of which the gall-bladder enlarges. This is to be traced from the normal position of the larger end of the gall-bladder (near the tip of the cartilage of the tenth rib on the right side) to the opposite side of the abdomen, crossing the middle line slightly below the umbilicus. The author states that on Feb. 15 he was asked to see a case of abdominal tumour by a friend. There was very little clinical evidence to be obtained; there was, however, a well-defined, hard, but rather resilient tumour, the longer axis of which exactly corresponded to the diagonal line above described. On this evidence the author diagnosed the case as one of distension of the gall-bladder, though a surgeon of large experience considered this diagnosis erroneous. On March 26, however, Mr. Tait operated. The tumour proved to be a distended gall-bladder, and a large number of calculi were removed.

4235. *Annandale on an Operation for Displaced Semilunar Cartilage.*—In the *Brit. Med. Jour.*, April 1885, p. 779, Prof. Annandale contributes an able article on the subject of displaced semilunar cartilages, and relates a case illustrating a new method of procedure which he recommends in such cases. A miner, aged 30, ten months previously to seeing Prof. Annandale, had felt something give way in his knee, whilst kneeling. He suffered great pain, but went on working for some hours.

The joint becoming greatly swollen, and the pain very severe, he was obliged to relinquish work, and was treated with blisters, &c., which reduced the swelling; the pain, however, continued, and the movements of the joint were interfered with by something 'slipping' in the knee. Having decided that the case was one of displaced semilunar cartilage, the author performed the following operation. An incision was made along the upper and inner border of the tibia, parallel with the anterior border of the internal semilunar cartilage; when all the vessels were secured, the joint was opened. It was then seen that the internal semilunar cartilage was completely separated from its anterior attachments, and was displaced backwards about half an inch. The cartilage was then drawn forwards into its natural position, and held there until three stitches of chromic catgut were passed through it and through the fascia and periosteum, covering the margin of the tibia. The wound in the synovial membrane and soft textures was closed with catgut stitches, and the limb was done up in a plaster-of-Paris bandage. The patient made a good recovery: in seven weeks he was able to leave off all splints and bandages, so that the joint could be exercised gently; and six months after the operation the patient was performing his work, without any signs of stiffness or locking of the joint.

4236. *Birch on Acute Mania following a Surgical Operation.*—In the *Brit. Med. Jour.*, April 1885, p. 695, Mr. R. Birch records the case of a middle-aged farmer, who had his foot amputated on account of an injury received from a thrashing-machine. Five days after the operation the plantar flap sloughed, but on the tenth day the wound was granulating healthily. Next day it was first noted that the patient suffered from delusions, and for the next five weeks he suffered from mania without delirium. About six weeks after the operation the patient was sitting up one day, and did not allude to any of his delusions, beyond saying he had gone through a great deal. After this, he gradually recovered his reason. There was no history of insanity in the man's family, beyond the fact that a paternal uncle had once suffered from melancholia for a short time. In the *Med. Times and Gaz.*, March 1885, p. 391, Mr. Barwell records a case in which he removed the left ovary from an unmarried woman, aged 29, and on the eighth day after the operation symptoms of insanity became well marked. These lasted for about three weeks. The patient was kept under care for some time afterwards, and was then discharged perfectly sane. [An interesting series of cases of reflex insanity may be studied in sect. 1376 of the *Medical Digest.—Rep.*]

4237. *Shirres on a New Long Splint for Fractures of the Thigh.*—In the *Lancet*, Jan. 1885, p. 152, Mr. G. Shirres describes a new splint for fractures of the thigh. It is constructed so that it can be lengthened after it has been adjusted. An engraving is given, showing the splint as supplied by Messrs. Arnold & Sons. It consists of two iron slides freely movable one upon the other, 3 feet long by 3½ inches broad. The advantages claimed are these. It may be set at any length, so as to suit a child or an adult. After the splint has been clamped at the requisite length and adjusted to the limb, extension may be put on by simply turning a screw, thus doing away with the necessity of tightening the perineal band. It is most useful for cases that require moving on board ship, &c., and where weights cannot be used for extension.

4238. *Banks on the Treatment of Intestinal Obstruction.*—In the *Lancet*, January 1885, p. 39, Mr. Mitchell Banks writes to say that, when speaking in a late discussion upon the treatment of obstruction of the bowels, he had no intention of overlooking the labours of Mr. H. O. Thomas, who insisted on the value of rest and opium in these cases. The author states that he learnt the principles of rest and opium in 1863 from Laycock and Christison. In cases of acute obstruction, with symptoms similar to those of a sharply strangulated hernia, only one treatment can be adopted—viz., rest, starvation, and opium—and, failing these, operation. As regards the use of calomel, minute doses are often most valuable in allaying distressing irritability of the stomach, while they cannot possibly add to the dangers of the obstruction.

4239. *Silvester on Saving of Life from Drowning by Self-inflation.*—In the *Lancet*, January 1885, p. 11, Dr. Silvester proposes a plan by which a person can inflate his own body, sufficiently to enable him to float for some time, in cases of prolonged immersion. The operation consists in making a small puncture in the mucous membrane of the inside of the mouth, just in the angle formed between the gum of the lower jaw and the side of the under lip or cheek, about opposite the first molar tooth of the lower jaw. The incision is to be made downwards, between the skin of the face and the superficial fascia of the neck. In order to inflate the skin of the neck and chest, the patient should close the mouth and nose, and make a succession of expiratory efforts, until the skin is fully distended with air. The time required for inflation is found to be less than three minutes. The advantages claimed for this plan are these. 1. The proceeding is perfectly harmless and almost painless, quickly done, and almost immediately recovered from. 2. It may be learnt in a few minutes, no technical knowledge being required, and may be accomplished by the person himself without assistance. 3. No special apparatus is required. In an emergency the point of a penknife, or even a sharp-pointed splinter of wood, is all that would be required. 4. The air could be repeatedly reinflated, and even during prolonged immersion.

4240. *Graham on Brittle Bones.*—In the *Boston Med. and Surg. Jour.*, Dr. Graham reports the case of a patient who had sustained eighteen fractures during a period of eighteen years. Nine of the fractures occurred in the right arm, two in the left arm, three in the right leg, and one in each collar-bone. The patient's father broke his bones fourteen times, and the father's cousin twenty-one times.

4241. *Keetley on Buried Sutures.*—In the *Brit. Med. Jour.*, May 1885, p. 880, Mr. C. B. Keetley contributes an article on 'Buried Sutures.' These are sutures which are completely covered by the skin, and do not involve that structure at all; they are strongly recommended to be used in all operations in which deep structures are involved, and where rapid union is required. The use of these sutures enables operations such as excision of the hip to be performed without the use of drainage-tubes in the after-treatment of the wound. The method of applying these deep sutures is thus explained by the author. Suppose an operation to be performed for the object of uniting the two ends of a deep nerve that has been divided. After the ends of the nerve have been united, whatever muscles or aponeuroses had been divided in cutting down upon the nerves would be restored to their original relationships, and kept there by aseptic animal sutures; then the wound in the deep fascia must be separately sewn up, and finally the wound in the skin must be closed with catgut, or silver, or whatever is preferred. The results to be expected from this method of procedure are these. 1. There is no need for drainage-tubes. 2. The sutured muscles and aponeuroses are eventually restored as regards function. 3. Deep, rough, and depressed cicatrices are avoided. 4. Necrosis of bone and sloughing of soft tissues are avoided. The author also states that he has found these sutures very successful in dealing with sebaceous cysts of the head. Having dissected out three from the scalp of a gentleman, the remaining cavities were obliterated by two sutures in each, passing them well through the floor of each small wound. No cutaneous sutures were used at all; the skin-wounds did not gape. A little salicylic acid dissolved in ether, and a little powdered salicylic acid, were placed over the wounds. The patient went about his usual business, and a fortnight afterwards the scab was removed, leaving three sound linear cicatrices.

4242. *Smyth on Swallowing a Safety-Pin.*—In the *Brit. Med. Jour.*, May 1885, p. 890, Dr. S. Smyth records the following case. A child, aged 3½ years, swallowed a safety-pin. The mother gave him a small quantity of castor-oil, which had caused sickness, and relaxed the bowels once only. A few hours after the accident the child was seen by the author, who ordered quiet, and a diet of hard-boiled eggs, biscuits, and milk, under which treatment the bowels became constipated. On the seventh day, 15 grains of compound rhubarb-powder were given twice, bringing away in the solid fæces, the pin, on the eighth day after it had been swallowed. [A large series of similar cases are noted in section 854 : 2 of the *Medical Digest.*]

4243. *Duncan on a Case of Ligature of Right Vertebral Artery of an Epileptic: Recovery.*—In the *Australian Med. Jour.*, March 1885, Dr. Duncan records the case of a young healthy-locking man, aged 30, who came under his care in September last, with a history of being subject to epileptic fits for fifteen years. The patient was kept under observation for one month, during which time he had on an average five fits every night and two during the day. Such had been his state for fifteen years in spite of all kinds of treatment. On Oct. 10 the author decided to perform the following operation. The head being inclined a little to the left side, an incision, three inches long, was made along the posterior border of the right sterno-mastoid muscle, terminating a short distance above the clavicle, the external jugular vein being divided and secured. The cellular tissue was divided the whole length of the wound, some lymphatic glands were pushed aside, and a depth reached on a level with the internal jugular vein. At this stage of the operation it became necessary to displace the internal jugular vein and other surrounding structures; this was being carefully done with a retractor, when the internal jugular vein suddenly ruptured. After some time, the operator was able to introduce his index finger into the proximal end of the rent, but not before the patient had nearly died of asphyxia, from which he was relieved by means of artificial respiration. The part of the vein, into which the author had inserted his finger, was next secured by passing an aneurysm-needle round the finger outside the vein, then threading and withdrawing it. Though the vein was out of view it was safely ligatured without including any other structures, and an additional ligature was tied above the rent. An opening was then quickly made in the aponeurosis covering the scalenus anticus and longus colli muscles, an inch below the transverse process of the sixth cervical vertebra; the muscular structures were then separated, and the artery was exposed. A ligature was passed round it and quickly tied. The wound was washed out with carbolic acid, and closed by means of carbolised kangaroo-tendon sutures. The patient made a good recovery from the operation; he had no fits for ten days afterwards, then one or two slight ones, and, at the end of four months he was sometimes four days without one. The fits were much less severe, and completely altered. The author trusts soon to record a successful completion of the treatment, when he has ligatured the left vertebral artery.

4244. *Francis on the Treatment of Varicose Ulcers by Martin's Bandages and Sponge-grafts.*—In the *Brit. Med. Jour.*, April 1885, p. 836, Mr. J. A. Francis describes a method of treating varicose ulcers of the leg with sponge-grafts. These grafts are prepared in the following manner. A piece of fine new sponge is kept for some time in a weak solution of carbolic acid; from the outside of this a piece is cut off with sharp scissors, so as to leave a smooth surface. The sponge is then pinched up in a pair of dressing-forceps, so as to leave the pinched-up smooth surface a little above the edge of the forceps; this is then cut off with a sharp razor, so that a thin section of the sponge is obtained. A number of these sections should be cut, and can be conveniently carried in one's pocket-book. In applying them to an ulcer, they should be damped first, and then cut a little smaller than the shape of the ulcer, and laid smoothly over it, with a soft rag covering it, and then the Martin's bandage should be evenly put on over all. The sponge will soon adhere by the growth of granulations between its interstices, and may be left on until it comes away with the scab; but often it has to be removed on account of the discharge being pent up beneath it. A poultice should then be applied to the wound to clean it, and a fresh piece of sponge put on as before. The author remarks that, in using Martin's bandage, care must be taken to teach the patient how to apply the bandage evenly; and he should be told to apply it before he gets up in the morning, and not to take it off until he gets into bed at night. Another point to be remembered is, that the patient should sleep with the foot of the bed placed on blocks, so that the heel is higher than the head.

4245. *Annandale on a Case of Bullet-Wound of the Abdomen.*—In the *Lancet*, April 1885, p. 740, Professor Annandale notes the following case. A lad, aged 15, was standing about two feet from another lad, who had a loaded revolver in his hand, when the revolver accidentally went off, wounding the boy in the abdomen. When seen by the author, the patient gave an intelligent account of the accident, and complained of but little pain. A wound was found about an inch and a half below and half an inch to the left of the umbilicus, and an operation was decided upon at once. The patient being under chloroform, an incision was made in a longitudinal direction for an inch and a half, including the bullet-wound in its centre. When the peritoneum was reached, a narrow slit was detected in it, through which was protruding a small piece of bruised omentum. When the omentum was pushed aside, a small piece of uninjured intestine presented itself; and on enlarging the peritoneal wound another knuckle of small intestine, with three distinct perforations in it, at once protruded. These three openings being carefully stitched by means of a continuous suture of fine catgut, after Lempert's method, the external and peritoneal wounds were enlarged, and a quantity of blood was found to be coming from a large vein in the mesentery, which had been perforated by the bullet. This vein was at once ligatured with catgut. On further examination of the intestines, two more wounds were discovered in the small intestine, two in the descending colon, and two in the pelvic portion of the rectum: all these were stitched in the same manner as the first three wounds. No bullet could be found; and after the cavity of the abdomen had been washed out with a solution of corrosive sublimate (1 in 2,000), the wound was closed by means of deep and superficial sutures. The patient seemed very well after the operation, and expressed himself as feeling comfortable; but the next morning he became exhausted, and died twenty-four hours after the operation. At the *post mortem* examination the bullet was found lying on the right side of the pelvis, immediately in front of the right ischial spine.

4246. *Kocher and Bull on Gunshot-wound of the Abdomen.*—In the *Medical Times and Gazette*, April 1885, p. 552, an interesting article is devoted to the subject of successful surgery of gunshot-wounds of the abdomen. The first case recorded occurred last summer at Berne, in the practice of Kocher, who performed laparotomy on a lad (aged 14) for a gunshot-wound of the stomach. Dr. Bull, of New York, has lately recorded a most interesting case. The patient was a man, aged 22, who was accidentally shot in the abdomen near the navel. Seventeen hours after the injury Dr. Bull opened the abdomen, and put all the intestines outside the wound, carefully searching for any lacerations in the coats of the intestines. Seven perforations in all were found, and carefully sutured. The intestines were then returned, the incision in the abdominal walls was sutured with heavy silk sutures, and a drainage-tube was inserted into the lower end of the wound. The patient made a good recovery, and was discharged about eight weeks after the operation. Dr. Bull argues that, given an abdominal wound with the patient in good condition, without any symptoms which enable the surgeon to determine whether or not the intestines have been perforated, it is proper to first explore the wound itself; and if the wound be found in the peritoneum, to enter also the peritoneal cavity by operation, and endeavour to remedy the damage done. The difficult question, in short, is not so much what cases are suitable for operation, as the class of cases in which it is not desirable to operate.

4247. *Maclean on the Use of Wire in the Sac in Cases of Aneurysm of the Aorta.*—In the *Brit. Med. Jour.*, May 1885, p. 940, Dr. W. C. Maclean refers to Loreta's case of abdominal aneurysm treated by the introduction of wire into the sac, and also to Mr. Moore's case treated in the same manner in the Middlesex Hospital. Dr. Maclean states that he was present at the *post mortem* examination of Mr. Moore's case, and had the opportunity of seeing not only the sac of the aneurysm with the wire coiled in it, but also most of the other organs. The immediate cause of death was inflammation of the sac and pericardium. Attention is, however, drawn to the fact that innumerable clots of varying consistence were hanging from the wires, ready to drop into the blood; and emboli, exactly like them, were visible in the arteries of the organs. This fact is worth bearing in mind, and is a danger which surgeons must reckon upon if they are inclined to repeat this bold operation.

4248. *Banks on the Treatment of Gangrenous Intestine in Strangulated Hernia.* In the *Med. Times and Gaz.*, May 1885, p. 602, Mr. Mitchell Banks contributes some able suggestions on the treatment of gangrenous intestine, and records a successful case of resection of the small intestine. The author sums up his remarks with the following conclusions. 1. When gangrenous gut is discovered in a hernial sac, no attempt whatever should be made to divide the stricture. 2. Practical experience is required to determine the expediency of drawing down into the hernial opening a fresh piece of bowel. 3. The cases appropriate for resection of the gut must be very few, requiring, as it does, that the patient should be young and vigorous, with abundant reparative power, that the hernial sac should not be full of putrid pus or evacuations from a perforated bowel; and the operation should be done in daylight, and with competent assistance and antiseptic precautions. So far, the statistics of resection of gangrenous bowel show a mortality of 52 per cent.; whereas, by making an artificial anus, all the patient's immediately dangerous symptoms are relieved, while he has a chance of subsequent cure (*a*) by spontaneous closure of the aperture; (*b*) by the use of the enterotome or the rubber tube; and (*c*) by the employment of resection at a later stage, the statistics of which show a mortality of only 38 per cent. 4. In resecting the bowel it is not necessary to have any apparatus to distend it; and while the fingers of an able assistant will generally serve to control the divided ends, it may be necessary to use some simple clamping instrument, having parallel blades and covered with rubber.

4249. *Hewitt on a New Method of Administering and Economising Nitrous Oxide Gas.*—In the *Lancet*, May 1885, p. 840, Mr. F. Hewitt describes a new apparatus for administering nitrous oxide gas. The author has devised a face-piece by which he is enabled, without removing it from the patient's face, to allow a portion of the contents of a two-gallon bag filled with nitrous oxide to escape, after inhalation, through an expiratory valve, and then, by suddenly depressing a small rod, to cut off all valve-action, and to allow the patient to inspire and expire the gas remaining in the bag. The action of this new face-piece is based upon the fact that pure nitrous oxide gas when inhaled is not decomposed, and that the expired gases from a patient under its influence are in much the same condition as when inhaled. This, however, is not quite correct, because, when a patient commences to take the gas, there is a certain amount of air in the patient's lungs to begin with; this dilutes the nitrous oxide gas, so that, if only two gallons are to be used, it is often impossible to place the patient completely under its effects. By Mr. Hewitt's method the lungs are washed out by the first inspirations of the gas, and when this is accomplished the valve is closed, and the patient can be anæsthetised by the remaining portion of the gas. The author states that in many operations it requires six gallons of gas under the old method, whereas he finds that for most cases at the National Dental Hospital he can anæsthetise them by his method with two gallons only of gas.

Richard Neale, M.D.

4250. *Margolin on Artificial Teeth as a Material for Filling Dental Cavities.*—In the *Zübovratchebnyi Vestnik*, Feb. 1885, p. 43, Dr. J. Margolin recommends artificial teeth as an excellent material for filling cavities produced by caries on the labial aspect of the anterior teeth. The stopping leaves nothing to wish in regard to cosmetic effect, as well as in regard to durability. In order to still heighten the cosmetic effect, Dr. Margolin fixes the duly fitted mass in the carious cavity by means of a cement, instead of gold. It is advisable, however, to inspect the state of the tooth every six or nine months.

4251. *Kürzakoff on a Case of Neuralgia Caused by Dental Caries.*—In the *Zübovratchebnyi Vestnik*, March 1885, p. 39, Mr. A. P. Kürzakoff, dental surgeon, of Moscow, refers to Scheff's dictum that a careful search for dental caries is indicated in every case of neuralgia of the trigeminus, and details, in support, a case of a patient, aged 23, who complained of 'unbearable' anomalous sensations about his left eye-ball, of paroxysmatic nature, and of two days' duration. An examination detected a carious cavity in the left upper bicuspid. Cleansing, and introduction of a piece of cotton-wool soaked in an ethereal solution of iodoform and chloral, removed every trace of suffering in a few hours.

4252. *Kürzakoff on Antiseptics in Dentistry.*—In the *Zübovratchebnyi Vestnik*, April 1885, p. 93, Mr. A. P. Kürzakoff, of Moscow, insists on the necessity of generally applying the strictest antiseptic measures in dental surgery, and expresses his belief that the adoption of such precautions will completely prevent the occurrence of phlegmon of the face or neck, angina Ludovici, and other disastrous and sometimes fatal complications which are occasionally observed in the train of dental operations. The dread of similar complications at present arrests the hand of many a dentist or surgeon, when they come across a case of maxillar periostitis caused by a carious tooth. The patient remains unrelieved. Meanwhile, it is very easy (the author says) to avoid both complications and pain in cases of tooth-drawing in the presence of periostitis. After the operation and due arrest of hæmorrhage, the 'open' alveolar wound must be washed out with a 2 per cent. solution of carbolic acid, then powdered with iodoform, and, finally, covered with hygroscopic cotton-wool.

4253. *Lubimoff on the Treatment of Molluscum Fibrosum by Corrosive Sublimate.*—Dr. P. D. Lubimoff, of Stavropol, reports (*Proceedings of the Caucasian Medical Society*, No. 9, 1884, p. 229) the case of a rose-coloured, firmish fibrous tumour, of the size of a very large pea, which grew for about eight years on the bridge of the nose of an anæmic and weak patient, aged 25. The patient having refused to undergo an operation without chloroform, the author began to paint the new growth with a solution of four grains of corrosive sublimate in one drachm of collodion. The painting was repeated at first every other day, then once in three or four days. Eighteen days later, the former tumour was represented only by a smooth rosy scar, which soon afterwards became pale and almost invisible. Dr. Lubimoff eulogises the same plan of the treatment in cases of congenital and acquired warts, and of acuminated condylomata. In cases of warts, however, he at first applies, by means of a small wooden pointed stick, a solution of one drachm of salicylic acid in one ounce of collodion, and resorts to the use of sublimated collodion only in the case of a return. The chief advantages of the sublimate treatment are its painlessness and destruction of pigmentation with formation of a white scar.

4254. *Minkewicz on a Case of Lipomatous Polypus of the Gullet.*—Dr. J. J. Minkewicz, of Tiflis (*Proceedings of the Caucasian Medical Society*, No. 12, 1884), details the case of an Armenian, aged 52, who for two years experienced steadily increasing difficulty in swallowing solid food, and of late could sleep only in the prone position, all other postures causing attacks of suffocation. Examination detected a soft, elastic, pyriform tumour, of the size of a large hen's egg, which was attached, by means of a broad pedicle, to the anterior wall of the gullet at the level of the cricoid cartilage. The tumour became visible in the pharynx (just behind the soft palate and tongue) only when the patient performed several successive eructative movements. The author tightened an elastic loop round the pedicle and put two ligatures higher up. On the next day he divided the pedicle between the ligatures, the removal of the new growth being absolutely bloodless. Four days later, the patient was discharged well and comfortable.

4255. *Kürbanovsky on a Case of Perforating Bayonet-wound of the Neck.*—In the *Voenno-Sanitarnoie Delo*, No. 11, 1885, p. 111, Dr. Kürbanovsky records a curious case of a private of the Omsky regiment, who, when rapidly running along the camp-ground, suddenly stumbled upon a stone and fell upon the bayonet of a rifle which was projecting from the floor of his tent at an angle of about 40° or 50°. The bayonet entered the patient's neck just above the manubrium sterni, a little to the left from the median line, and emerged, projecting about three inches, on the posterior aspect of the neck, between the second and third cervical vertebræ, at about two finger-breadths to the left from the median line. The patient himself pulled out the bayonet, and then fainted. He was immediately brought to the field hospital. On examination, there were found only two small wounds in the situations pointed above, and slight general swelling and tenderness of the left side of the neck. Hæmorrhage was trifling. There were no signs of any injury of the vertebræ, trachea, or œsophagus, or of the nerves and vessels; and no fever. Swelling and tenderness disappeared in two days; in nine days cicatrisation was complete. [*See* a case of transfixion of the neck by a stick, reported by Mr. Davies-Colley, in the London Medical Record, Aug. 1882, p. 321.]

4256. *Terner on a Case of Cholecystotomy in Empyema of the Gall-Bladder.*—In the *Khirurgitchesky Vestnik*, Feb. 1885, p. 77, Dr. G. Terner, of St. Petersburg, gives a short review of the literature (Marion Sims, Lawson Tait, Spencer Wells, Langenbuch, Winiwarter, Witzel; for the latter *see* the London Medical Record, Feb. 1885, p. 37), and details the following interesting case. A peasant woman, aged 45, was admitted to the hospital with an enormous abdominal enlargement, and agonising pain in the right hypochondrium. She had been bedridden for six months, suffering from the pain, frequent sickness, and vomiting; from time to time icteric attacks had occurred, but the patient's medical attendant never had been able to detect in the stools any gall-stones. On examination, the author felt in the right side of the abdomen a tumour which reached downwards as low as the pelvis, backwards to the lumbar region, its inner border extending to two fingers' breadth from the navel; the upper margin of the cyst was indistinct, the upper limit of the hepatic dulness normal. There were present bright redness and fluctuation at the anterior abdominal wall, at a spot corresponding to about the centre of the tumour; the abdominal wall in this situation was firmly adherent to the cyst, and markedly thinned. A more careful examination was not possible, on account of the tumour being extremely tender when handled. The stools were of normal colour. Slight fever was present. The author diagnosed suppurating hydatid cyst of the liver. A vertical incision, about five centimètres long, was made (by Dr. E. V. Pavloff) over the fluctuating spot, through the whole thickness of the abdominal wall. The incision opened an enormous cavity distended with fluid, greenish yellow pus, and fœtid gas. A number of small gall-stones escaped with pus. A finger, introduced into the cavity, reached the liver. The gall-bladder was washed out with a 2 per cent. solution of boracic acid; then three large-sized drainage-tubes were inserted, the remaining part of the wound being closed with sutures. The subsequent treatment consisted in a frequent change of dressing, and irrigations with the boracic solution. On each occasion, numerous gall-stones escaped. The cavity gradually contracted, the fistula being closed about eleven weeks after the operation. The patient is now enjoying excellent health; the limits of the hepatic dulness are normal. The whole number of gall-stones removed and discharged in this case amounted to 510. They weighed one ounce and five drachms, and consisted of cholesterine and bile-pigment. V. IDELSON, M.D.

4257. *Albert on a Successful Case of Splenectomy.*—Professor Albert showed, at the meeting of the Gesellsch. der Aerzte of Vienna, on May 8 (*Wien. Med. Blätter*, No. 20), a woman whose spleen he had several weeks previously extirpated on account of mobility and displacement. The wound was completely healed, the patient's health was good, the nutrition of the blood was progressively improving, and there was not as yet any hypertrophy of the thyroid gland.

4258. *Albert on the Treatment of Popliteal Aneurysm.*—Professor Albert discussed at a recent meeting of the Gesellsch. der Aerzte in Vienna (*Wien. Med. Blätter*, No. 20), a case of popliteal aneurysm on which he had performed Antyllus' operation. Notwithstanding the extent of the wound, which had healed by granulation, there was no impairment of movement in the joint. So far as the operation was concerned, the success was complete; but there was such hyperæsthesia of the lower parts of the leg and the foot, that the patient could not bear a bandage or put his foot to the ground. Dr. Albert had thought that, with blood-saving and antiseptic precautions this mode of treatment promised well, but he would now return to the simpler and equally successful method of proximal central ligature.

4259. *Gussenbauer on Resection of the Pylorus.*—The first operation of the kind on man was performed by Péan unsuccessfully; ten of Billroth's cases died; eight survived, as have others, of Czerny's, Kocher's, &c.; and one of Wölfler's still lives, three years after the operation, without return of the disease. Gussenbauer had performed it four times without success, when a woman, aged 32, and otherwise healthy, was sent to his ward from that of Professor Pribram, one of the physicians of the hospital at Prague, with dilatation of the stomach, vomiting, and other symptoms, quite characteristic of cancer of the pylorus, a round tumour being easily felt to rise and fall during peristalsis. The operation was performed on March 21, and has thus far been successful. Dr. Gussenbauer discusses the conditions under which it is justifiable, the question being entirely one of the extent to which the adjacent structures are implicated. No case in which the head of the pancreas has been removed has survived; and when the meso-colon and transverse colon have had to be torn apart, gangrene of the gut has always followed: in such cases Czerny would advise resection of the colon also. The exclusion of the contents of the stomach from the peritoneal cavity, even after the stomach has been (as in Gussenbauer's case) well washed out as Billroth directs, is a work of great difficulty. Dr. Gussenbauer recommends Wölfler's modification of Czerny's suture for bringing together the mucous membrane, and Lambert's for the completion of the operation. In some cases, in which a large part of the smaller curvature has been removed, he would follow Lambert's method throughout. When this part of the operation was completed, he thoroughly cleansed the abdominal cavity with a solution of salicylic acid. The patient was not allowed *any food for three or four days*, and then only small quantities of milk for another week. Examination of the tumour revealed typical carcinoma. Unfortunately, the neighbouring glands were involved, but they were removed as far as possible. E. F. WILLOUGHBY, M.B.

MEDICINE.

RECENT PAPERS.

4260. SHAW.—Retention and Accumulation of Fæces. (*Bristol Med. Chir. Jour.*, March.)

4261. COLLIE.—The Diagnosis of Small-pox. (*Med. Times and Gaz.*, April, p. 441.)

4262. CLARK.—On some Points in the Natural History of Primitive Dry Pleurisies. (*Lancet*, April, p. 712.)

4263. DONKIN.—Extensive Malignant Disease of the Stomach with Obscure Symptoms. (*Med. Times and Gaz.*, March, p. 378.)

4264. BRUNTON.—Disorders of Digestion. (*Brit. Med. Jour.*, Jan., p. 57, *et seq.*)

4265. AFFLECK.—Periostitis in Typhoid Fever. (*Brit. Med. Jour.*, May, p. 939.)

4266. KING.—Periostitis following Typhoid Fever. (*Brit. Med. Jour.*, May, p. 939.)

4267. DICKSON.—Varicosity of the Lingual Vein as a Diagnostic Sign. (*Brit. Med. Jour.*, May, p. 888.)

4268. DRYSDALE. — Migraine and its Relation to Uræmia. (*Practitioner*, April 1885.)

4269. KONSTANTINOVSKY, M. V.—On a Case of Malarial Fever Complicated with Croupous Pneumonia. (*Proceedings of the Caucasian Medical Society*, No. 11, 1884, pp. 262-67.)

4270. TER-GRIGORIANTZ, G. K.—On a Case of Cure of Gastric Ulcer. (*Proceedings of the Caucasian Medical Society*, No. 11, 1884, pp. 252-61.)

4271. UGHETTI.—Contributions to the Study of Suppurative Hepatitis in Italy. (*Riv. Clin.*, Fasc. xii., 1884, and *Annali Univ. di Med.*, Feb. 1885.)

4272. Bianchi.—Stethoscopic Auscultation and Percussion. (*Riv. Clin.*, No. 10, 1884, and *Annali Univ. di Med.*, Feb. 1885.)

Art. 4260. *Shaw on Retention and Accumulation of Fæces.*—In the *Bristol Med. Chir. Jour.*, March 1885, Mr. J. G. Shaw records an interesting case of retention and accumulation of fæces in a lad aged 15½ years. The patient had always suffered from obstinate constipation, the bowels being relieved about once a month. On admission into the Bristol Royal Infirmary his abdomen measured 42½ inches, five inches above the umbilicus; due, evidently, to the existence of hardened fæces, which suggested the idea of a bag containing small potatoes. On exploring the rectum it was found to be empty and widely dilated, while the lower end of the sigmoid flexure was full of fæces, and was pushed down into the rectum. Moderate doses of nux vomica and aloes were given twice a day, and in the course of three days much dark-coloured fæces began to come away. Later on, enemata of oil of rue were added to the treatment, bringing away copious motions weighing three or four pounds a day. This soon cleared out the left side of the abdomen, but the ascending colon remained distended and standing up like a lofty hammock on the right side. The enemata were then stopped for a time, and frequent doses of belladonna, followed by castor-oil, were next given. Soon the patient recovered the free use of his bowels, and the large intestine was emptied of its solid contents, but it was found that the relaxed abdominal walls readily permitted of its dilatation by gaseous accumulation. The constant current was then applied to the bowels every night, together with purgatives, strychnia, and enemata. The patient rapidly improved, gaining flesh (seventeen pounds in five weeks), and the abdomen gradually became reduced. During the last forty-eight days the patient was in hospital he had 241 actions of the bowels. The author remarks that the patient must always remain in danger of obstruction of fæces, or of passage of fæces into the vermiform appendix, or of a twist of the cæcum upon itself, on account of the dilated condition of the large intestine. The only chance of a permanent cure seems to be the establishment of an artificial anus communicating with the lower end of the ileum for a period of some months, thereby permitting the colon to lie empty and to gradually contract in calibre.

4261. *Collie on the Diagnosis of Small-pox.*—In the *Med. Times and Gaz.*, April 1885, p. 441, Dr. A. Collie contributes some observations on the diagnosis of small-pox. The chief difficulties met with in diagnosing this disease are:—1. the occurrence of scarlatiniform and measly rashes; 2. the varied forms of the eruption in the hæmorrhagic varieties of the disease; 3. the want of clear views on the subject of chicken-pox; and 4. the practice of vaccination, which greatly modifies the disease. In the normal forms the most important factor in diagnosis is the element of time, as the rash has a characteristic appearance for each day of its existence. The hæmorrhagic form may simulate scarlet fever, but is distinguished by the hæmorrhages into the conjunctiva. The author divides the hæmorrhagic forms into four classes, viz. (*a*) Variola hæmorrhagica pustulosa; (*b*) Variola hæmorrhagica vesiculosa; (*c*) Variola hæmorrhagica papulosa; (*d*) Variola nigra. Cases belonging to the first two classes are unmistakable. In the last two forms the purpuric spots are larger than the purpuric spots met with in other fevers, such as typhus. Measles in the early stage is very like some kinds of small-pox, but in small-pox, when the rash is so thick as to simulate measles, the hand passed over the face conveys the feeling of furrowed roughness as on passing the hand over a piece of corduroy, whereas in raised confluent measles the sensation is as though the hand was passing over a piece of velvet. Glanders, accompanied by a pustular eruption, has been mistaken for variola; but in glanders the disease begins in the mucous membrane of the nose and respiratory passages, giving rise, as its first symptom, to a discharge from the nose, a symptom not met with in small-pox.

4262. *Clark on some Points in the Natural History of Primitive Dry Pleurisies.*—In the *Lancet*, April 1885, p. 712, is published an article referring to the Lumleian Lectures, delivered by Sir Andrew Clark. The underlying thesis of these lectures is stated to be the bringing into prominence the fact that the lung may undergo destruction by invasion of fibroid tissue originating in pleural inflammation, and that tubercular infection is not the sole cause of the phthisical process. The author commenced his lectures by giving details of cases of dry pleurisy, and leads up to cases which, after a number of years, succumbed, and disclosed most extensive pulmonary disorganisation, combined with equally extensive changes in the pleura. The *Lancet* finds difficulty in following the lecturer in the distinctions laid down between the various forms of the pleural affection, based on a study of the nature of the exuded material, as the distinctions are often so blurred as to render them unsuitable for definition. The facts which strikingly distinguish cases of non-tubercular from those of ordinary tubercular phthisis are thus enumerated: the unilateral character of the affection, its extremely slow progress, the absence of pyrexia or emaciation; and the frequent entire lack of evidence of an inherited taint, coupled with the failure to detect bacilli in the sputa. It must be admitted, however, as a fact, that tubercular phthisis may become quiescent, or may imitate fibrotic changes in which it shares, and by reason thereof may progress with comparative slowness. Nevertheless, the truly tubercular are always prone to an outburst of the infection. The article concludes by saying that it would have been interesting to have learned whether the subjects of pleurogenic phthisis, or of the fibroid state of the lung resulting from simple pleurisy, ever become the victims of tubercular infection.

4263. *Donkin on a Case of Extensive Malignant Disease of the Stomach with Obscure Symptoms.*—In the *Med. Times and Gaz.*, March 1885, p. 378, Dr. Donkin gives the notes of a case of extensive malignant disease of the stomach in a woman, aged 64, in which all marked symptoms were absent until about two months before death. The patient was a barge-woman; her history was, that eight weeks before she was admitted into hospital, she began to be very sick soon after food, and never longer than half an hour after it. No blood was ever vomited, nor was there any pain. The patient lost flesh, and gradually became weak and unable to do anything. Four weeks before admission she fell into the hold of the barge, a distance of six feet since then she complained of pains in her back and generally all over. Six days after admission she became slightly delirious, and soon afterwards ecchymoses were seen all over the body and limbs. She remained delirious for two days; then had a slight fit, became comatose, and died in twelve hours. On *post mortem* examination, a large but thin intra-arachnoid clot was discovered; it was thickest in the right parietal region. The stomach was the seat of a malignant infiltration, chiefly affecting the mucous and submucous coats, especially along the walls of the lesser curvature, leaving the cardiac and pyloric orifices unaffected. The only secondary growth was a mass, of the size of a walnut, lying in the great omentum, about an inch from the lower border of the stomach near the pylorus. On microscopic examination, it was found that the submucous coat had increased the most, and it was at the junction of this with the strictly mucous coat that the carcinomatous growth was chiefly found. Examination of the omental mass proved the growth to be epithelial. The author remarks that the diagnosis he made during life was, that the patient was suffering from some injury, with a history of alcoholism, rather than the existence of long-standing organic disease. [A very interesting case of latent gastric cancer is reported in the LONDON MEDICAL RECORD, 1878, p. 117. Another recorded by the reporter in the *Practitioner*, July 1883, p. 1, was a cause of great uncertainty to several consultants during life, the vomited matter on one occasion alone being the sole symptom that convinced the medical attendant that he had to deal with latent cancer, as the *post mortem* examination clearly revealed. Somewhat similar cases may be studied in the *Medical Times and Gazette*, Jan. 1883, p. 74, and the *Lancet*, Sept. 1883, p. 540.—*Rep.*]

4264. *Brunton on Disorders of Digestion.*—In the *Brit. Med. Jour.*, Jan. 1885, p. 57 *et seq.*, are printed the Lettsomian Lectures delivered by Dr. Lauder Brunton before the Medical Society, London. The author commences his subject by considering the fact that man cooks his food, while the lower animals eat theirs raw, and points out that the practice of cooking was familiar to man at a very early period of the world's history. The health of man depends on the proper performance of the following functions: 1. Tissue-change; 2. Removal of waste; 3. Supply of new material. Under the term digestion are included the solution and absorption of the materials taken as food. The author then passes on to consider the various stages of the process of digestion, laying great stress on the necessity for thorough mastication. The act of swallowing food causes an increased supply of blood to the nerve-centres, and to all the glandular structures concerned in the digestive tract. Kronecker discovered that the act of swallowing seemed to remove entirely the inhibitory action of the vagus upon the heart, for the time being, so that the pulse became extremely rapid. In the lecturer's own case he found that sipping half a wine-glass full of water would raise his pulse from 77 to considerably over 100. So that, in fact, a glass of cold water, slowly sipped, would stimulate the heart better than a glass of brandy swallowed at a draught. When food reaches the stomach it is subjected to a sort of churning for three or four hours, and the pylorus is closed to prevent any escape of food into the duodenum; the pylorus then relaxes, owing, it is said, to the increasing acidity of the contents of the stomach; but this is doubtful, as many cases occur in which there is an abnormal acidity, where the food is retained in the stomach for an excessive time, instead of passing on rapidly to the intestines. The whole process of digestion is carefully followed through the whole extent of the intestinal track, and then the lecturer takes a *menu* and shows the reasons why soup should begin a dinner, then fish should follow, afterwards meat and vegetables, with bread and cheese coming before dessert. The savoury cheese acting as a stimulant to the circulation and to the nervous system, and the process of mastication needed during dessert, especially when eating nuts, &c., show that there is good reason in the common manner of terminating a dinner. If moderation be exercised during a meal, and alcoholic stimulants are taken in small quantities, no injurious effects follow; but if there has been any excess the stomach will suffer, and the next day symptoms of gastric indigestion will appear. The most marked of these are—loaded tongue, loss of appetite, tendency to nausea, and, perhaps, even vomiting.

4265. *Affleck on Periostitis in Typhoid Fever.*—In the *Brit. Med. Jour.*, May 1885, p. 939, Dr. Affleck records three cases of periostitis as a sequela of typhoid fever. These occurred in a total of 117 cases in the typhoid wards of the Edinburgh Fever Hospital. Two of them were in young men, aged 21, one of whom was admitted—in the third week of the fever—with periostitis commencing in the right tibia. The other, who was admitted at the commencement of the fever, showed symptoms of marked periostitis in the right humerus in the third week, and this was followed by a similar condition of the right tibia. The third case was that of a girl, aged 9, who was admitted with a very severe attack of typhoid fever, and was attacked in the fifth week with periostitis of the right humerus.

4266. *King on Periostitis following Typhoid Fever.*—Dr. H. W. King, in the *Brit. Med. Jour.*, May, p. 939, records the case of a man, aged 29, who had been for eight weeks an inmate of a fever hospital, suffering from typhoid fever. About a week after he was discharged he began to feel his right leg very heavy and stiff, and on being seen by Dr. King it was discovered that the whole of the right leg was œdematous from the knee to the ankle. An incision was made over the tibia, giving great relief, but no pus was obtained. The patient made a good recovery.

4267. *Dickson on Varicosity of the Lingual Vein as a Diagnostic Sign.*—In the *Brit. Med. Jour.*, May 1885, p. 888, Mr. G. C. Dickson draws attention to the value of noticing the state of the lingual veins, as a means of diagnosis. The lingual vein, being a branch of the internal jugular, will indicate the state of the blood-current in it, and so will approximate to the state of the brain-sinuses, the veins of Galen, and, indeed, the whole intracranial venous system. Distension and varicosity of the linguals will become associated with passive congestion in them, precisely the conditions in which thrombotic and hæmorrhagic lesions are apt to occur. The author refers to two cases in which he noticed the varicose state of the lingual veins, both patients dying from an attack of apoplexy.

4268. *Drysdale on Migraine and its Relation to Uræmia.*—In the *Practitioner*, April 1885, Mr. A. Drysdale contributes an able article on migraine, based upon a number of cases which have come under his notice. The cause of this disease is enveloped in mystery; it is distinctly hereditary, affecting several members and generations of the same family. It is sometimes correlated with phthisis, usually of the more chronic variety. Enforced chastity seems in some way to predispose to it, and it often disappears after marriage. Summer and hot weather certainly determine the periods of the attacks. Some suppose it to be due to want of sufficient sleep; others say that it is caused by excess of sleep, and especially by the habit of napping during the day. The author considers that the symptoms depend upon the accumulation in the blood of a peculiar poisonous substance, possibly allied to creatin and creatinin, and that this poison has a special affinity for the roots of the great nerves at the base of the brain, the optic, the ophthalmic, and the pneumogastric. The reason for supposing that this substance is allied to creatin and creatinin, is the close resemblance of the symptoms to those of uræmia. The blindness, headache, vomiting, and subsequent stupor, bordering upon coma, in migraine are undistinguishable, except in degree, from the same symptoms in uræmia. The poison speedily produces its own elimination. The author then describes a severe attack, and states that, with regard to treatment, a drug must be administered which is known, from its physiological action, to be certain to reach the seat of the complaint. Caffeine, theine, and guarana fulfil these conditions to a certain extent, but the best results are obtained from the use of nitroglycerine and sepia. The latter is especially successful in mitigating an attack, though it is not able to completely arrest one. Exercise, regularly pushed to the point of fatigue, is the only means of prevention. With reference to prognosis, the author states that, even when it is most intense, patients are not permanently injured by this malady; and that, when it occurs in conjunction with phthisis, the latter generally has a favourable issue.

RICHARD NEALE, M.D.

4269. *Konstantinovsky on a Case of Malarial Fever Complicated with Croupous Pneumonia.*—Dr. M. V. Konstantinovsky, of Tiflis, reports (*Proceedings of the Caucasian Medical Society*, No. 11, 1884) the case of a soldier with quotidian intermittent fever, in whom pneumonia developed. With the advent of the latter, the quotidian type of intermittent underwent a transformation into the tertian. In the period of convalescence from pneumonia, the malarial fever again assumed a quotidian character. The pneumonic process ran its course under a comparatively low temperature, and, in the absence of any severe symptoms, critical defervescence did not present its usual abrupt character. From the study of the case, the author ventures to draw the conclusion that 'under the influence of malarial infection, the action of the pneumonic poison on the patient's system was mitigated.'

4270. *Ter-Grigoriantz on a Case of Cure of Gastric Ulcer.*—Dr. G. K. Ter-Grigoriantz, of Tiflis, describes at considerable length (*Proceedings of the Caucasian Medical Society*, No. 11, 1884) an interesting case of round ulcer of the stomach, with severe hæmatemesis, in an anæmic lady, aged 22, in whom, after failure of the administration of Carlsbad salt and nitrate of silver, he succeeded in obtaining rapid and permanent cure from the use of an iced solution of perchloride of iron (six drops of oleum martis, Ph. Ross., in a glassful of water, at first six, afterwards four, times daily, an hour before meals), an iced mixture of equal parts of milk and boiled water, well-toasted white bread, and an ice-bag on the epigastric region. The symptoms disappeared in about two weeks. When seen two months later, the patient was in excellent health. The author resorted to the administration of perchloride of iron in view of its being recommended in cases of gastric ulcer by Professor Gerhardt.

V. IDELSON, M.D.

4271. *Ughetti on Suppurative Hepatitis.*—Cases of suppurative hepatitis seem to be of not unfrequent occurrence in South Italy. Ughetti (*Riv. Clin.*, Fasc. xii., 1884) gives the history of eight cases. In three, the hepatic abscess was opened externally by incision through the abdominal wall: these cases recovered. In one, recovery followed repeated aspiration. Two died, notwithstanding aspiration and incision. In two, the abscess opened spontaneously by the bronchi, recovery resulting. Among the causes of suppurative hepatitis, wounds are most rare. Dysentery is a much more frequent cause. The hepatitis may be developed contemporaneously or consecutively, therefore possibly there is a common origin to both. The disease, as is well known, is most common in hot climates. It is said that non-acclimatisation is a predisposing cause, but in the cases observed by Ughetti this did not appear. All his cases occurred in men, 26 being the age of the youngest, 43 of the oldest. The fever of suppurative hepatitis is variable in intensity and duration. When present it is generally intermittent; often it only appears when the collection of pus is too great for the cavity containing it. In a case published by Ciaramelli (Naples 1880) there had never been any fever, yet a vast abscess of the liver was found, encapsuled by a thick layer of connective tissue, which prevented the reabsorption of the pus. Discussing the symptoms, Ughetti remarks on the influence of palpation, hepatic pain, pain in the shoulder, jaundice, deeply pigmented urine, &c. As to the diagnosis, he mentions specially the difficulty in certain cases of distinguishing suppurative hepatitis from Naples fever, in which the course of the fever is very irregular. He advises exploratory punctures for diagnosis and treatment. Entire hepatic cells are not ordinarily found in the pus, but may sometimes be obtained on scraping the bottom of the abscess. The prognosis is not as hopeless as most authors assert. In forty-eight cases not operated on, the mortality was 76 per cent. In forty-five cases in which incision was practised, the mortality was only 42 per cent. In thirty-eight cases opening spontaneously by the bronchi, the mortality was only 14·6 per cent. All cases should be operated on as early as possible; peritoneal adhesions are not indispensable. Aspiration is often sufficient to effect a cure.

4272. *Bianchi on Stethoscopic Auscultation and Percussion.*—The author places the stethoscope over that part of an organ which is in immediate contact with the thoracic or abdominal wall, and at the same time practises percussion; and, as long as the percussion is confined to the area of the viscus, more or less intense vibrations are heard, according to the depth of the points percussed and the greater or lesser size of the organ. As soon as the limits of the organ are passed, the vibrations cease, and a noise only is heard. In this manner, the outlines of the organ can be clearly determined. The best form of stethoscope is one which does not require to be held with the hand, as Calvot's. The author's method has many practical applications; by it may be determined the cardiac area (except in those cases in which no part of the heart is in immediate contact with the thoracic wall), the extent of a pleuritic effusion, and its change of level on change of position, the area of endothoracic tumours, &c. Even more useful is this method in percussion of the abdominal organs. By it it is possible to distinguish the dulness due to effusion surrounding the liver from that due to the liver itself, and to determine exactly the area of the liver even when an intestinal loop traverses it. The same method makes it possible to distinguish tumours not belonging to a viscus from those connected with it, and to map out the splenic dulness in cases of ascites when ordinary percussion will not do so. The gastric area and that of the kidneys may be obtained also with mathematical precision. To determine the latter, the patient must be in the supine position, and the stethoscope placed over the ordinary site of the kidneys. This area can only be, however, determined when, in spite of their weight, they remain *in situ*; if the cellular tissue be lax and the kidneys fall forward, the method is of no use. The best points at which to put the stethoscope are, for the right lung, the third space above the nipple; for the left lung, the second space in the mid-clavicular line; for the heart, in the left parasternal region, in the third or fourth intercostal space; for the liver, the last right ribs, along the nipple or mid-axillary lines; for the stomach, the epigastrium three centimètres under the xiphoid appendix, or the last left ribs in the nipple line; for the spleen, the ninth intercostal space in the left mid-axillary line; for the kidneys, the vertebral line at the twelfth dorsal vertebra. Another advantage of this method is that, by the force of the vibration. the greater or less consistency of the organ examined can be determined, and hence its possible alterations.

G. D'Arcy Adams, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

4273. Verneuil.—Chloral in Large Doses in Traumatic Tetanus. (*Gazette des Hôpitaux*, Jan. 1885.)

4274. Page.—The Abuse of Bromide of Potassium in the Treatment of Traumatic Neurasthenia. (*Med. Times and Gaz.*, April, p. 437.)

4275. Deas.—The Use of Permanganate of Potash in Insanity Associated with Amenorrhœa. (*Brit. Med. Jour.*, April, p. 778.)

4276. Wilks.—The Value of Arsenic in Anæmia and in Atrophic Conditions. (*Lancet*, April, p. 653.)

4277. Jones.—Blisters in Head-symptoms Produced by Cranial Lesions. (*Med. Times and Gaz.*, April, p. 469.)

4278. Hepburn.—The Salisbury Steak. (*Philadelphia Med. Reporter*, Jan. 1885.)

4279. Martel.—Decoction of Valerian as a Sedative. (*Brit. Med. Jour.*, Jan., p. 199.)

4280. An Injection for Gonorrhœa. (*New York Med. Record*, Nov. 29, 1884.)

4281. Granville.—A New Remedy in Gouty Obesity and Dyspepsia. (*Lancet*, April, p. 745.)

4282. Illingworth.—On Whooping-cough. (*Lancet*, April, p. 782.)

4283. Auld.—Blood-poisoning Treated by Hypodermic Injection of Carbolic Acid. (*Lancet*, April, p. 784.)

4284. Kesteven.—Eucalyptus in Typhoid and other Fevers. (*Practitioner*, May.)

4285. Holland.—Antipyrin in Phthisis and other Febrile Diseases. (*Practitioner*, May.)

4286. Cotter.—Glycerine in Febrile Dryness of the Tongue and Thirst. (*Indian Med. Gaz.*, January.)

4287. Cooper.—The Tolerance and Advantages of large Doses of Potassium Iodide. (*Lancet*, May, p. 876.)

4288. Wake.—Creasote as a Solvent of Quinine. (*Brit. Med. Jour.*, May, p. 941.)

4289. Martindale.—Permanganate of Potash in Pills. (*Brit. Med. Jour.*, May, p. 974.)

4290. Baeza.—Helenin as an Antiseptic. (*Med. Times and Gazette*, May, p. 588.)

4291. Betz.—Phosphorus in Craniotabes. (*Memorabilia*, and *Med. Times and Gaz.*, May, p. 621.)

4292. Wood.—The Treatment of Colds and Bronchitis. (*Philadelphia Therap. Gazette.*)

4293. McAvoy.—Glycerinum Acidi Carbolici in Diabetes Mellitus. (*Lancet*, April, p. 736.)

4294. Shabliovsky, M. J.—On Tincture of Iodine in Intermittent Fevers. (*Russkaia Meditsina*, No. 6, 1885, pp. 116–119.)

4295. Gatchkovsky, G. J.—Resorcin in Malignant New Growths. (*Russkaia Meditsina*, No. 6, 1885, pp. 121–23.)

4296. Manguby.—On Viburnum Opulus in Angina Pectoris. (*Russkaia Meditzina*, No. 6, 1885, p. 123.)

4297. Jacubsky.—On the Use of Antipyrin in Children. (*Proceedings of the Odessa Medical Society*, No. 18, 1884, pp. 230–31.)

4298. Shaposhnikoff.—On the Action of Antipyrin in Febrile Diseases. (*Proceedings of the Odessa Medical Society*, No. 18, 1884, pp. 227–29.)

4299. Zviagintzeff, M.—On the Treatment of Dental Disease by Chinoline. (*Zübovratchebnyi Vestnik*, April 1885, pp. 62-64.)

4300. Snejkoff, N. F.—Some Comparative Observations on the Influence of various Substitutes for Quinine on Malarial Fever. (*Medits. Oboz.*, Fasc. xxiii., 1884, pp. 1042–47.)

4301. Radakoff, A. N.—On Tincture of Belladonna in the Night-sweats of Phthisis. (*Medits. Obozrenie*, Fasc. vi., 1885, pp. 629–30.)

4302. Nikolaï.—On the External Use of Chloral-Hydrate in Night-sweats. (*Vratch*, No. 14, 1885, p. 217.)

4303. Karst, S. M.—On the Treatment of Enteric Fever by Naphthalin. (*Medits. Pribav. k'Morsk. Sborn.*, March 1885, p. 218.)

4304. Favr, V. G.—On Oxygen Inhalations in Puerperal Eclampsia. (*Vratch*, No. 13, 1885, p. 197.)

4305. Sznabl.—On the Treatment of Rachitis by Phosphorus. (*Medycyna*, 1885, No. 1; and *Vratch*, No. 4, 1885, p. 60.)

4306. Genkin.—On the Treatment of Dysentery and Epidemic Summer Diarrhœa. (*Proceedings of the Kaluga Medical Society*, 1884; and *Vratch*, No. 12, 1885, p. 190.)

4307. Rüsanoff, N. N.—On Cod-liver Oil in Hemeralopia. (*Vratch*, No. 16, 1885, p. 253.)

4308. Scheffer, L. D.—On the Treatment of Intestinal Obstruction by Washing Out the Stomach. (*Vratch*, No. 14, 1885, p. 217.)

4309. Pierd'houy.—Scopolein: a new Mydriatic. (*Gazz. Med. Ital. Lombard.*, May 2, 1885.)

4310. Lurtz.—Lactic Acid as an Escharotic. (*Wiener Med. Blätter*, No. 19, 1885.)

4311. Marcano.—On Peptonisation. (*Der Fortschritt*, April 20.)

4312. Hager.—The Cause of the Reddening of Carbolic Acid. (*Der Fortschritt*, April 20.)

Art. 4273. *Verneuil on Chloral in Large Doses in Traumatic Tetanus.*—In the *Gazette des Hôpitaux*, Jan. 1885, Professor Verneuil records a case of tetanus which occurred in a youth, who was admitted into hospital, ten days after his finger had been crushed, suffering from a moderate amount of trismus. The patient was of robust frame, and in good condition of health when admitted; and was placed in Bonnet's apparatus in order to secure absolute immobility of his body, which was kept at a constant and elevated temperature by being completely encased in wadding. Good diet was given, and constipation guarded against. Large doses of chloral were administered, in sufficient quantities to plunge the patient into a profound sleep; and it is necessary to continue giving chloral in doses which shall keep the patient in a kind of continuous coma for from fifteen to eighteen days. The author states that the great benefit derived from chloral in these cases is to give the drug freely for at least fifteen days, and then to gradually reduce the amount each day. The amount usually necessary is from twelve to fifteen grammes daily. The danger in tetanus is due to the extent that the muscles of the larynx or pharynx, together with those of the heart and lungs, are involved. In cases where suffocation, dysphagia, or spasm of the glottis supervene, two methods of treatment are available: (1) the continuous current; (2) tracheotomy. The author concludes by saying that in the next case which presents itself to him, with symptoms of dysphagia, he intends to practice gastrostomy in order to feed the patient.

4274. *Page on the Abuse of Bromide of Potassium in the Treatment of Traumatic Neurasthenia.*—Mr. Page, in the *Med. Times and Gaz.*, April 1885, p. 437, contributes a lecture on the subject of traumatic neurasthenia. The author considers a class of injuries which are most commonly induced by railway collisions, but may be met with after any kind of accident in which the injury is followed by nerve-exhaustion and prostration, with pronounced and frequent functional disorders of the nervous system, which may or may not be associated with injury to the spinal column. A large number of these cases recover but slowly; and one reason for this tardy recovery is to be found in the common practice of giving these patients large and frequent doses of bromide of potassium. This method of treatment produces what is termed 'bromism,' the symptoms of which are closely allied to those of general nervous shock, and are summed up by Dr. Bennett as follows. The intellect is blunted, memory impaired, ideas are confused, and the patient has a constant tendency to somnolence. The special senses are weakened, and the whole body is infirm. Reflex excitability is lowered, and the sexual powers are almost abolished. In advanced cases, even imbecility or paralysis may ensue. The mucous membranes become dry, so that various functional disorders arise, such as flatulence, catarrh, diarrhœa, &c. The heart's action is slow and weak, and respiration is shallow and imperfect. The integument is frequently covered with an acne-like eruption. To these symptoms may be added a general cachexia. When the bromide is discontinued, many of these cases of injury from shock gradually improve.

4275. *Deas on the Use of Permanganate of Potash in Insanity Associated with Amenorrhœa.*—In the *Brit. Med. Jour.*, April 1885, p. 778, Dr. P. M. Deas contributes a paper on the effect of permanganate of potash on the uterine function. The author states that he chiefly employed this drug in obstinate cases of amenorrhœa, associated with mental derangement, and cites the following case. A young woman had been nursing a sick relative for some time; this caused her health to break down entirely. The catamenia were suppressed, and the patient gradually fell into a state of melancholia, with stupor. When she came under the author's care the catamenia had been suppressed for about a year; her general health was much below par, she was anæmic, and suffered from constipation; her mental condition was strange, she never spoke a word, and there was almost complete abeyance of volitional power, with a tendency to the cataleptic condition. After trying general treatment for two or three months, it was decided to give a trial to permanganate of potash; at first 1 grain was given in pill three times a day; this was increased after a time to 2 grains three times a day. After two months the catamenia appeared, and, almost simultaneously, a rapid improvement set in in her mental condition and general health. At the next period the pills were renewed for a week before, and hot hip-baths were administered. The catamenia again appeared, and the patient made a rapid and uninterrupted recovery. The author states that he has employed this drug in similar cases, and from his experience draws the following conclusions. 1. Permanganate of potash is a safe and useful emmenagogue, and free from the disadvantages which attend some other remedies of this class. 2. Its use may be continued for months without any bad effects, and success need not be despaired of even after many months. 3. Even when it fails as an emmenagogue, it acts beneficially as a general and nervine tonic. In making pills containing this drug, the best excipient is kaolin ointment; all saccharine ingredients should be carefully avoided, as being liable to cause decomposition, and even spontaneous combustion. In the *Journal*, April 1885, p. 876, Dr. Bampton writes that prescribers of potash will find unguentum resinæ a convenient and suitable excipient, as kaolin is difficult to manipulate. [Can Dr. Bampton guarantee the solution of a pill, thus prepared, during its passage through the alimentary canal?—*Rep.*]

4276. *Wilks on the Value of Arsenic in Anæmia and Atrophic Conditions.*—In the *Lancet*, April 1885, p. 653, Dr. Wilks contributes an article on arsenic as a therapeutic agent. The author states that arsenic has a great influence in curing cutaneous affections of a gouty origin, and therefore it is not surprising that the same remedy has great power in preventing attacks of gout. In the same way, many gouty patients who suffer from neuralgia are cured by means of arsenic. In some forms of nervous affection, the author has found it quite unique in its action, and he mentions the case of a lady who suffered for years from neuralgia in the eyeball, which was only relieved during the times she took arsenic. The most remarkable effects of arsenic are seen in cases of anæmia and various forms of cachexia and atrophy. Many cases of what have been styled 'pernicious anæmia' have been cured by five-minim doses of liquor arsenicalis given three times a day, and two cases in which Addison's disease was suspected were completely cured by giving arsenic. In cases of wasting and general cachexia its action is most efficacious, where there is no malignant disease nor other organic disease to be detected as the cause of the wasting. To say that the remedy is always successful is more than can be supposed; but, where every other means has failed, it is worth the trial to give this remedy in the form of the liquor arsenicalis in doses of from four to five minims three times a day.

4277. *Jones on Blisters in Head-Symptoms produced by Cranial Lesions.*—In the *Med. Times and Gaz.*, April 1885, p. 469, Dr. Handfield Jones records two instances of cerebral symptoms from long previous injury to the head. The first case was that of a man, aged 34, who received a cut on the right forehead sixteen years ago, and for the last two and a half years suffered from pain round the right eye, and headache all over the head, which was generally brought on by exertion. He had frequent attacks of giddiness, and occasional fits of unconsciousness. The patient was under Dr. Jones's care for about two months, during which time ten blisters, at various intervals, were applied to the forehead, producing each time almost instant relief from pain for many hours and sometimes days. The second case was that of a navvy who received several wounds on the scalp through some bricks falling upon him. About two years after the accident he became subject to attacks of giddiness. In this case eighteen blisters (in all) were applied to the head, the result being a complete recovery from all his bad symptoms; and when he was seen by the author fourteen years afterwards, there had been no return of the attacks.

4278. *Hepburn on the Salisbury Steak.*—In the *Philadelphia Medical Reporter*, Jan. 1885, Dr. Hepburn speaks of the 'Salisbury' treatment for indigestion, and describes the way in which the 'Salisbury steak' is prepared in America. The best slices of a round of beef are cut off with *dull* knives, so that the meat is bruised and not cut. The meat is then pounded by means of a meat-chopper with blunted knives, so that the pulp of the meat is made to come to the top, whilst the tough fibrous portion remains below. The pulp is scraped off, and made into cakes. These are broiled on a gridiron quickly; the object being to cook the outside meat, leaving that inside almost raw. A little salt and pepper can be added to suit the taste.

4279. *Martel on Decoction of Valerian as a Sedative.*—In the *Brit. Med. Jour.*, Jan. 7, 1885, p. 199, M. Martel is stated to have found a decoction of valerian root to be most useful as a sedative. A patient had both hands and a part of the forearm crushed by a threshing-machine. There was great pain for some time, then the following dressing was used. Forty grammes of valerian root in a litre of water were boiled for an hour, and 10 per cent. of carbolic acid was added to it. After the application all pain disappeared, the wound became clean and healthy, and the patient made good progress.

4280. *Injection for Gonorrhœa.*—In the *New York Medical Record*, Nov. 29, 1884, the following is recommended as a most superior injection in gonorrhœa. ℞. Powdered iodoform, 20 parts; carbolic acid, 10 parts; glycerine, 80 parts; water, 200 parts.

4281. *Granville on a New Remedy in Gouty Obesity and Dyspepsia.*—In the *Lancet*, April 1885, p. 745, Dr. Mortimer Granville writes that he has been obtaining good results of late in cases of gouty obesity and dyspepsia, from the use of the salts extracted from ox-bile. They are given to persons with an inheritance to gout, in whom there is a tendency to the deposition of fat in the omentum and elsewhere, coupled with a deficiency of production and maintenance of heat. The bile-salts are given in the form of a pill, each containing about 4 grains of the taurocholate and glycocholate of soda, and are to be taken with food at each meal. The results are very striking. The stools are rendered characteristically rich in bile without purging, the food is readily digested, and the accumulations of fat seem to melt slowly away, being burnt off in the system as nutritive fuel.

4282. *Illingworth on Whooping-cough.*— In the *Lancet*, April 1885, p. 782, Dr. Illingworth writes that he has found the wearing of picked oakum by patients suffering from whooping-cough to be a most efficacious mode of treatment. It can be worn round the neck in muslin, or on the chest as a pad stitched to the underclothing. The author also applies locally the glycerine of tannic acid with a laryngeal brush two or three times a day, and internally gives one to three minims of chloral, one to three minims of belladonna, one grain of alum, and one minim of carbolic acid, in syrup, every two or three hours. Much success is also met with from the use of a liniment of turpentine, acetic acid, and yolk of egg, mixed with the liniment of belladonna in the proportion of 1 to 7, and applied to the chest, back, and neck night and morning. By these means, the author states, he cures the worst cases in from seven to ten days.

4283. *Auld on Blood-poisoning treated by Hypodermic Injection of Carbolic Acid.*—Mr. Auld, in the *Lancet*, April 1885, p. 784, records the case of a lad, aged 16, who received a cut from a knife charged with putrid matter across the palmar aspect of the third and fourth fingers of the left hand. Two days afterwards the patient was suffering from pain and stiffness in the axilla, with a temperature of 103°·8. Mr. Auld then injected six minims of a 4 per cent. solution of carbolic acid into the unaffected arm. After twelve hours the patient felt better, and the temperature had fallen to 101°·8. The injection was then repeated, and in twenty-four hours all bad symptoms had disappeared.

4284. *Kesteven on Eucalyptus in Typhoid and other Fevers.*—In the *Practitioner*, May 1885, Mr. Leighton Kesteven extolls the use of oil of eucalyptus in cases of typhoid fever. Of 220 cases attended by the author during eighteen months, only four died, and in all of these some unfavourable condition existed which complicated the fever. The dose given is ten minims of the oil every four hours. In order to remove the nauseous and rough semi-resinous taste of the oil, it is better to give it in the form of an emulsion, as follows: to each dose add half a drachm each of aromatic spirits of ammonia, spirits of chloroform, and glycerine. The effects produced by this drug are: 1, a steady and permanent reduction of the force and frequency of the pulse; 2, a steady lowering of the temperature; 3, a marked effect is produced on the tongue, the dry brown tongue being frequently changed into a moist tongue with a slight amount of fur upon it; 4, the skin becomes moist and soft as the temperature falls. The author then describes the general treatment and modes of diet which he employs. Great faith is placed in the liberal use of whisky, most patients requiring from five to ten ounces daily, whilst in very severe cases as much as thirty ounces in twenty-four hours must be given. Generally the patient should be fed on milk, thickened with isinglass, beaten up eggs, milk and soda, cocoa, and, where diarrhœa exists, ground rice and milk. In asthenic cases chicken-broth (concentrated to ten ounces of clear broth from a whole fowl) given in one ounce doses, or the juice of half-cooked mutton, or beef-tea, made in a pot without water and strained through fine muslin, are given with advantage. [In 1881 Mr. Bell described in the *Edinburgh Medical Journal* the great value of the eucalyptus in typhoid fever (*vide Medical Digest*, sect. 1503 : 3).—*Rep.*]

4285. *Holland on Antipyrin in Phthisis and other Febrile Disorders.*—In the *Practitioner*, May 1885, Dr. J. Holland enters very fully into the use of antipyrin in cases of phthisis. The author gives notes of twenty cases in which he has tried this drug with great success. The various means employed at St. Moritz for lowering the temperature in such cases include quinine, the various preparations of salicin, digitalis, aconite kairin, and Warburg's tincture. For the last eight months, however, Dr. Holland has been using antipyrin, and finds it more successful than any other mode of treatment. Most patients are able to bear, without inconvenience, from 15 to 20 grains of the drug, every four hours.

4286. *Cotter on Glycerine in Febrile Dryness of the Tongue and Thirst.*—In the *Indian Med. Gaz.*, Jan. 1885, Surgeon-Major Cotter points out that he has found painting the tongue with glycerine of immense value in relieving the dryness of the tongue and thirst, in cases of typhoid and other fevers. The author does not know how it acts, whether it increases the secretion from the mucous membrane, or whether it makes an artificial coating, and prevents sordes.

4287. *Cooper on Tolerance and Advantage of Large Doses of Potassium Iodide.*—In the *Lancet*, May 1885, p. 876, Mr. Arthur Cooper comments on the necessity of pushing iodide of potassium in cases of syphilis. The author states he makes a rule of pushing the drug of iodide until some effect is produced. The largest daily dose he remembers to have given was 540 grains of the iodide of ammonium. It is also stated that 'he who holds his hand under the impression that he has given the iodides a full and sufficient trial, because a certain number of grains or drachms has been reached, will fail to obtain some of the most important results which it is in the power of iodine to produce.' On the same page, Mr. Jackson writes that he had to treat a case of chronic ulcerated throat of syphilitic origin: no improvement was obtained until the patient took forty grains of iodide, three times a day; this dose was maintained for several weeks, during which time he gained more than a stone in weight.

4288. *Wake on Creasote as a Solvent of Quinine.*—In the *Brit. Med. Jour.*, May 1885, p. 941, Dr. E. G. Wake notes that he finds in creasote an excellent solvent of quinine, and for many years has ordered quinine pills to be made up with this menstruum.

4289. *Martindale on Permanganate of Potash Pills.*—In the *Brit. Med. Jour.*, May 1885, p. 974, Mr. Martindale writes that it is impossible for permanganate of potash pills to 'become hard and insoluble,' if they be made up according to the *Extra Pharmacopœia.* It is also stated that kaolin, or porcelain-earth, is immensely used for the purpose of adulterating calicoes and long-cloths, and the calico used by hatters as a basis for silk hats contains a large quantity of it. Kaolin is not a recent introduction into pharmacy, for Professor John Marshall used it quite sixteen years ago as a dusting powder for hospital use. Mr. Martindale then explains why he first suggested kaolin as a pill-excipient. Formerly he made up permanganate pills with vaseline and paraffin-wax, but, so combined, the pill-mass wanted firmness; this the addition of the inert unoxidisable powder kaolin gave to it, and enabled the mass to be readily rolled into pills. Thus made, the pills neither become hard nor insoluble, and are fairly stable; volumetrically estimated, the author finds that, after two months' keeping, 92·8 per cent. of the permanganate still exists in the pills as permanganate.

4290. *Baeza on Helenin as an Antiseptic.*—In the *Med. Times and Gaz.*, May 1885, p. 588, an article is extracted from a Spanish journal, in which Señor Baeza recommends the alkaloid helenin, which is obtained from *Inula Helenium.* This drug has lately been found to possess remarkable antiseptic properties by Dr. Korat. It arrests putrefaction more perfectly than salicylic, boracic, or carbolic acid, and is not irritating. In cases of retained placenta, a solution of 3 grains of helenin in 300 grammes of water, used as an injection, produces wonderful results. A case of anthrax, which was spreading whilst being treated with quinine, charcoal, carbolic acid, &c., quickly improved when a solution of helenin was used. Used as a gargle in cases of ozæna it is most efficacious. In the case of a woman with intermittent fever, which had resisted treatment for two months, it quickly yielded to the internal administration of 25 centigrammes of helenin combined with one gramme of quinine in 20 pills given during each intermission. In phthisis it is most useful in checking diarrhœa, and also in the enteritis of children.

4291. *Betz on Phosphorus in Craniotabes.*—The *Med. Times and Gaz.*, May 1885, p. 621, states that Dr. Betz, in his *Memorabilia*, writes that he obtains most satisfactory results from the local application of phosphorus in cases of craniotabes or soft occiput. The formula employed consisted in 30 grammes of olive-oil and one decigramme of phosphorus, rubbed in over the head night and morning. The author finds that the softness of the bones disappears after some weeks; the fontanelle and the contour of the head become smaller, and the hair more abundant.

4292. *Wood on the Treatment of Colds and Bronchitis.*—In the *Philadelphia Therap. Gazette*, Dr. Wood contributes an article on colds and the simple forms of bronchitis. Amongst the most efficient and sedative expectorants the author places large doses of alkali, and recommends from half an ounce to an ounce of citrate of potash during the twenty-four hours. The following prescription is recommended: ℞ Potassæ citrat., ℥ij.; succi limon., ℥ij.; syrupi ipecac., ℥ss.; syrupi q.s., ad ℥vj. Half an ounce to be taken five or six times a day. After two or three days it will be necessary to give stimulant expectorants; the author prefers chloride of ammonium, given every two hours, to squill or senega, but states that, in his hands, oil of eucalyptus has replaced all other stimulant expectorants. It may be given to the amount of forty minims a day in adults, in the form of capsules, two each containing five minims being taken for each dose. The author also draws attention to the great value of counter-irritation in bronchitis and severe colds, and refers to a useful and almost forgotten remedy, the oil of amber, which is especially valuable in the bronchitis of young children. The oil should be diluted with one to three parts of sweet oil, and should be applied to the chest as a sort of stupe upon flannel.

4293. *McAvoy on the Use of Glycerinum Acidi Carbolici in Diabetes Mellitus.*—In the *Lancet* April

1885, p. 736, Dr. McAvoy writes that he gave a patient, suffering from diabetes mellitus, five-minim doses of glycerinum acidi carbolici; the result being that the thirst was relieved almost at once and the urine became nearly free from sugar (*vide Medical Digest*, sect. 339 : 6).

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4294. *Shabliovsky on Tincture of Iodine in Intermittent Fever.*—In the *Russkaia Meditzina*, No. 6, 1885, p. 116, Dr. M. J. Shabliovsky, of Djelal-Ogly, Tiflis Government, writes that the perusal of Dr. Concelti's article in the *Gazzetta degli Ospitali*, No. 58, 1883 (*see* also the LONDON MEDICAL RECORD, December 1883, p. 507) induced him to give a trial to tincture of iodine in 26 cases of malarial fever, 21 of which were of the simple quotidian variety, 2 duplex quotidian, and 3 tertian. Eighteen of the cases were of recent origin; 5 were of old standing, the paroxysms returning again and again, in spite of quinine; and 3 did not yield at all, either to quinine or arsenic. All 26 cases were cured by tincture of iodine, which was administered in doses of eight or ten grains, in five ounces of distilled water, three times daily. On an average, cure was effected by 90 drops of the tincture, the minimum quantity used being 50 drops, the maximum 280. The average duration of the treatment was 3·1 days, the minimum, 2 days; the maximum, 9. The author never saw either gastro-enteritis or hæmorrhage from the use of iodine. Two of the patients complained of temporary slight feeling of pressure in the epigastrium. The majority of the patients felt a sensation of warmth, or even burning, in the pharynx. [In the *Vratch. Vedomosky*, No. 356, 1879, p. 658, Dr. N. Sudeikin stated that he successfully treated malarial fever by tincture of iodine in fifteen-drop doses (dissolved in three ounces of water with one drachm of eleosaccharum menthæ) three times a day, and never observed any gastric disturbances. He alleged that relapses after the iodine treatment occurred less often than after quinine. Meanwhile, Dr. M. Stepanoff (*Vratch. Vedom.*, Nos. 395 and 397, 1879), who cured 22 of 25 cases by iodine tincture (in fifteen-drop doses, in a weak solution of iodide of potassium, three times a day), saw relapses in about 50 per cent. of his cases. In the *Vratch*, No. 21. 1881, p. 352, Dr. K. Ejoff writes that he treated with invariable success quotidian and tertian fevers by tincture of iodine, given in three- or five-drop doses, three times daily. Paroxysms usually discontinued on the second or third day of the treatment, never later than on the sixth. The only drawback of the treatment was not unfrequent appearance of diarrhœa, sometimes with admixture of blood.—*Rep.*]

4295. *Gatchkovsky on Resorcin in Malignant New Growths.*—In the *Russkaia Meditzina*, No. 6, 1885, p. 121, Dr. G. J. Gatchkovsky, of Rybinsk, details four cases of cancer-like new growths, in which he, following the instance of Dr. Mannino (*Zeitschr. für Therapie*, No. 12, 1883, p. 132), applied locally resorcin, either in substance or in the shape of a 50 per cent. vaseline ointment. In two cases of what seemed to be epithelioma of the lower lip, complete cicatrisation followed after eight and five weeks' treatment; in one of them there was no return up to the date of the article (thirteen months have elapsed); but in the second case, by the end of two months the cicatricial tissue became exulcerated, and lancinating pain reappeared; the ulcer again healed under resorcin treatment of three weeks' duration. A third patient, a woman aged 56, presented a malignant tumour of the anal margin, as large as a hazel-nut, and diffuse cartilaginous infiltration of the lower part of the rectum. The tumour entirely disappeared after fifteen days' powdering, twice a day, with resorcin; subsequently, daily rectal suppositories with 20 grains of resorcin were administered, but unfortunately the patient soon left the town, and thus was lost out of sight. A fourth patient, a woman, aged 45, was admitted to the hospital about a month before her death, with advanced cancerous destruction of the whole right half of the tongue, and with induration of the submaxillary lymphatic glands. Powdering (twice daily) with resorcin rapidly removed the offensive odour and hæmorrhagic tendency, and also greatly improved the general state of the ulcer. [Dr. Gatchkovsky found resorcin in powder of great use, also in cases of acuminated condylomata and fungus umbilici; *see* the LONDON MEDICAL RECORD, Dec. 1883, pp. 505 and 507.]

4296. *Manguby on Berries of the Snow-ball Tree in Angina Pectoris.*—The successful results obtained by Dr. Jacubovsky in two cases of angina pectoris treated by dried leaves of the snow-ball tree (*Viburnum Opulus*) *see* the LONDON MEDICAL RECORD, Dec. 1883, p. 506) led Dr. Manguby, of Odessa (*Russkaia Meditzina*, No. 6, 1885, p. 123) to try the dried berries of the snow-ball tree in a severe case of the same disease in an obese lady, aged 40, who had been for eighteen months unsuccessfully treated by castoreum, convallaria, assafœtida, nitrate of silver, bromide of potassium, valerian, steel, quinine. An infusion made of two tablespoonfuls of dried snow-ball berries to one glass of water, and divided in three or four portions, was taken daily. After two months' treatment, the paroxysms began to come only once in four or six weeks (instead of every two or three days, as they had used to occur before). The same treatment being continued for another six months, the patient gradually made a complete recovery. Not a single paroxysm of angina occurred during these eight months.

4297. *Jacubsky on the Use of Antipyrin in Children.*—Dr. Jacubsky, of Odessa, details (*Proceedings of the Odessa Medical Society*, No. 18, 1884) two cases of enteric fever and one of pulmonary tuberculosis, in which he administered antipyrin. To one of the typhoid patients, a girl, aged 14, the drug was given for six days in daily doses of one to two scruples, in three portions, at an hour's interval. One-scruple doses lowered the temperature about 1°·2 or 1°·3 C.; two-scruple doses, about 2° C., and more, the effect lasting about five hours. The drug invariably caused sweating, which was the more profuse, the larger the dose had been administered. At the same time antipyrin seemed to increase cough. To another typhoid patient, aged 10 months, only two four-grain doses were given; the temperature fell 1°·6 C., the decrease being accompanied with perspiration; here again the drug seemingly increased cough. In a third case, that of a tuberculous boy, aged 7, antipyrin was used in doses of from six to twelve grains, from one to three times daily, at an hour's interval. The antipyretic action was very marked, but each time cough and dyspnœa grew considerably worse, and the pulse became weaker and smaller. Vomiting was absent in all three cases. While admitting a high antifebrile power of antipyrin, Dr. Jacubsky states his belief that the drug displays a depressing influence on the cardiac action, in which fact he detects an explanation of the increase of dyspnœa and cough in his cases.

4298. *Shaposhnikoff on the Action of Antipyrin in Febrile Diseases.*—Dr. Shaposhnikoff, of the Odessa Jewish Hospital (*Proceedings of the Odessa Medical Society*, No. 18, 1884), administered antipyrin in seventeen adult cases (thirteen of enteric fever, one of typhus fever, three of pulmonary phthisis), and to three children, aged from 1 to 5, suffering one from scarlatina, one from small-pox, and one from catarrhal pneumonia. To the adult from one to two grammes every hour were given until the temperature descended to the normal level. To children under 5 years of age, the drug was administered in doses of two grains to every year. In all the cases, antipyrin gradually lowered the temperature from 1°·5 to 5° C., and kept it at the normal level for the period varying between seven and twenty-four hours (or even more), after which a gradual rise, without any rigors, followed. In the first days of the treatment, as a rule, considerably larger doses of the drug were required (to bring the temperature to the normal) than in the subsequent days. The pulse, under the influence of antipyrin, became fuller and slower, falling from 120 or 130 to 100 or 112 per minute; the respiration became more regular, deeper, and less frequent. The author eulogises the beneficial action of antipyrin on the general state of patients, especially of children. The patients felt comfortable and cheerful; headache and malaise disappeared, and the tongue became moist; the change lasted for six to twenty-four hours. Of accessory symptoms, in one-third of the patients vomiting, and in a half sweats, occurred. In one patient (a woman) urticaria developed, the rash disappearing with discontinuing the drug. The author never saw collapse following the administration of antipyrin, though some of the patients took as much as twenty-four grammes in nine or even five days.

4299. *Zviagintzeff on Chinoline in Gangrene of the Dental Pulp.*—Chinoline, as an antiseptic material for dressing diseased teeth, was first recommended by Dr. Jul. Scheff in 1882. Following this recommendation, Dr. M. Zviagintzeff (*Zübovratchebnyi Vestnik*, April 1885, p. 62) tried the drug in twenty-eight cases of gangrene of the pulp (in three cases of spontaneous disorganisation, in three of necrobiosis in consequence of acute inflammation of the pulp with excessive accumulation of inflammatory exudation, and in twenty-two cases of intentional destruction of the acutely inflamed pulp by means of arsenic). Having prepared the cavity of the tooth in an ordinary way, the author introduced into it two or three small globuli of cotton-wool soaked in a 20 per cent. solution of Merck's tartrate of chinoline, and he then covered all with a comparatively large piece of hygroscopic wool sprinkled with the powdered chinoline salt. In the cases where the pulp of the dental root was also destroyed, he first carefully filled up the radical canals with dry chinoline powder, and only then introduced the globuli mentioned above. The dressing was changed daily or every other day, the change being preceded by washing out the cavity of the tooth with a strong stream of a warm solution of permanganate of potash (3 or 4 grains to 6 ounces of water). The duration of the treatment in cases of arsenical gangrene varied between two and seven days, the odour disappearing in two to five days, and suppuration ceasing in two to seven days. In cases of gangrene after acute inflammation of the pulp, odour disappeared on the seventh to ninth day of the treatment, complete recovery ensuing in ten or eleven days. In cases of '*désorganisation spontanée*,' chinoline dressing was not always beneficial; in the successful cases an improvement was usually observed after eight or ten days' treatment. Generally, the results gained by Dr. Zviagintzeff were less striking than those obtained by Dr. Scheff.

4300. *Snejkoff on Tincture of Iodine, Burnt Alum, &c., in Malarial Fever.*—In the *Medits. Oboz.*, Fasc. xxiii., 1884, p. 1042, Dr. N. F. Snejkoff refers to the energetic efforts made of late by Russian practitioners in searching for cheap substitutes for quinine in the treatment of malarial fevers, and himself contributes a series of comparative observations concerning the action of tincture of iodine, tincture of eucalyptus, salicylate of soda, Fowler's solution, and burnt alum. He conducted his therapeutic experiments at a strongly malarial locality in Southern Russia—the village Sloüta, Glükhov district, Tchernigov Government—exclusively amidst peasantry, all the patients suffering from quotidian or tertian fever. The drugs named above were administered in each case successively, until the cure was obtained from one or another. The author's general conclusion is this. 'All the substitutes in their antimalarial action occupy a far lower stand than quinine, with which none of them may be equalled.' Tincture of iodine [eulogised by Stepanoff in the *Vratch. Vedom.*, Nos. 395 and 397, 1879; Nevodnitchansky, in the *St. Petersburg Med. Wochensch.*, No. 21, 1878, and *Medits. Vestnik*, No. 46, 1883; Grinnel in the *Cincinnati Lancet*, Sept. 30, 1878; Concetti and Morison in the LONDON MEDICAL RECORD, Dec. 1883, p. 507] arrested the paroxysms in four recent cases, but remained entirely inactive in other nine, and, in addition, sometimes produced gastric disturbances. Salicylate of soda (recommended by Zielewicz and Buch) proved of use now and then, but only in large doses, and then epigastric pain was observed. Tincture of eucalyptus (much praised by Gimbert, Keller, Bertherand) gave only failures (as in the hands also of Fichter, Shkolnik, Krassovsky: *see* the LONDON MEDICAL RECORD, Aug. 1883, p. 323). Burnt alum, also, did not act at all on malarial fever and the enlarged spleen, even when administered in larger than eight-grain doses. (Hence the author sides with Saltykoff, Gavrilko, Kalantaroff, Grigorieff, Ignatieff, Koltchevsky, Anfimoff, Balmasheff, against Shidlovsky, Savvinsky, Tzitrin, Petroff, Surin.) Arsenic proved to be a more active substitute for quinine, the best results being obtained from subcutaneous injection of Fowler's solution (from three to five drops at a time). A combined administration of arsenic with iodine or with salicylate of soda occasionally cured the disease after arsenic alone had failed. Dr. Snejkoff concludes his interesting paper with the following words of Dr. Toropoff, bearing on the subject. 'It is more advantageous for a peasant to pay his last rouble for quinine, and to be cured in two or three days, than to toss about on his bed for weeks, being unable to work, and trying various substitutes, the price of which, added to that of lost working days, will after all make rather more than one rouble.'

4301. *Radakoff on Tincture of Belladonna in Night-sweats of Phthisis.*—In the *Lancet*, Oct. 27, 1883, p. 757, Mr. J. R. Forrest, of Brandesburton, recommended the treatment of colliquative sweats in phthisis by nightly sponging the body with a lotion consisting of four grains of sulphate of zinc, one drachm of belladonna, and one ounce of water.

Mr. Forrest's recommendation was taken up by Dr. A. N. Radakoff, of the Military Hospital in Moscow (*Meditz. Obozrenie*, Fasc. vi., 1885, p. 629), who in the first place tried to elucidate which of the constituents of Mr. Forrest's lotion controls the perspiration. Accordingly, the author divided his patients into three groups, in one of which the patient's body was rubbed with a solution of sulphate of zinc alone; in a second, with alcohol alone; and in a third, with tincture of belladonna alone. No effect whatever being obtained in the first two groups, the author limited his further observations to the use of tincture of belladonna alone. The experiments were made on fifty phthisical patients with night-sweats, and consisted in rubbing the body with a solution of one drachm of the tincture in one ounce of water. The general outcome of the author's observations is that tincture of belladonna really presents a very efficacious remedy for night-sweats in phthisis. To obtain success, however, it is imperatively necessary, first, to use the solution freely (so that the skin remain moist); and, secondly, to undertake the rubbing not earlier than one or two hours before the usual time of occurrence of night-sweats in the case given. Of fifty patients treated by the tincture under a strict consideration of both of the conditions, in forty-nine night-sweats did not occur at all, or almost so. On the other hand, when the tincture was used in a scanty quantity, or when it was used as early as six, five, or four hours before the time of sweats, the results were negative, or nearly so.

4302. *Nikolaï on the External Use of Chloral-Hydrate in Night-sweats.*—In the *Vratch*, No. 14, 1885, p. 217, Dr. Nikolaï emphatically recommends the treatment of night-sweats (in phthisical as well as in all weak patients) by daily (at bed-time) sponging the whole body with a solution of two drachms of chloral-hydrate in two glassfuls of equal parts of water and *vodka* (aquavitæ), at the temperature of 15° to 18° Reaum. (65°·75 to 72°·5 F.). In exceptionally obstinate cases, it is advisable, in addition to the sponging, to put on the patient a clean shirt soaked in the chloral solution, and then carefully dried. The procedure is well borne by the patients. The best results were obtained by the author in children suffering from non-phthisical night-sweats, three or four spongings being often sufficient to check profuse perspiration of several weeks' duration. The author is not aware of any contra-indications to the plan above described.

4303. *Karst on the Treatment of Enteric Fever by Naphthalin.*—Professor Rossbach's favourable opinion of the action of naphthalin in enteric fever and various intestinal diseases led Dr. S. M. Karst, of St. Petersburg (*Meditz. Pribav. k'Morsk. Sborn.*, March 1885, p. 218), to study both the antiseptic property of naphthalin and its therapeutic action in the said affections. With the former aim in view, he took a series of fresh infusions of hay, meat, and urine, and another of the same fluids in a state of advanced putrefaction, and then mixed them all with naphthalin in powder, or saturated them with naphthalin vapour. On examination of the fluids twenty-four hours later, all of them, excepting the fresh urine, were found containing myriads of putrefaction-bacteria. Naphthalin proved capable of checking putrefaction only in fresh urine: hence the author drew the conclusion that the drug possesses a very slight antiseptic property. The results of Dr. Karst's clinical observations were not more satisfactory. He administered naphthalin internally in fourteen cases of enteric fever, in six of which the temperature ran as high as 40° and 41° C. The drug did not produce the slightest impression on the course of the temperature curve, but caused sickness and vomiting; the typhoid state remaining unaltered. Similarly, the internal use of naphthalin in diarrhœa either had no effect whatever, or made the case still worse. The author takes the opportunity of remarking that 'naphthalin administered internally is a good expectorant in those cases where it does not produce sickness.'

4304. *Favr on Inhalations of Oxygen in Puerperal Eclampsia.*—At a recent meeting of the medical section of the Kharkov Society of Experimental Sciences, Professor V. G. Lashkevitch, in the course of a communication on the therapeutic value of oxygen in neuro-pathology, pointed out that oxygen possesses a considerable power of lowering an increased reflex action, and also made the suggestion that oxygen inhalations may prove of service in cases of puerperal eclampsia. Acting on the suggestion of Professor Lashkevitch, Dr. V. G. Favr, of Kharkov (*Vratch*, No. 13, 1885, p. 197), resorted to oxygen in two cases, and obtained brilliant results. The first of the cases was that of a seamstress, primipara, aged 19, who was brought to the hospital in an unconscious state, with cyanosis, stertorous breathing, and frequent eclamptic seizures, each of the latter being preceded by an uterine contraction. Warm baths, wet packings, and enemata with chloral-hydrate, brought no relief; chloroform inhalations only slightly controlled the intensity of the convulsive paroxysms. In view of the failure of all these means, oxygen was tried. In five minutes from the beginning of the inhalations, the patient asked for water, and then fell into a quiet sleep of two hours' duration, the pulse descending from 120 to 90 per minute; uterine contractions ceased to be a starting point for convulsive fits. The latter reappeared each time when the inhalations had been stopped, and again gave place to sleep and quiet on resuming the administration of oxygen. The delivery was accomplished with the help of Barnes' dilators, and of puncture of the membranes. The patient left the hospital on the nineteenth day after the labour, her general health and the state of the kidneys being greatly improved under an appropriate treatment. A second patient, primipara, aged 18, was attacked with eclampsia about one and a half hour after the labour. Two severe paroxysms (each of twelve minutes' duration, separated by a free interval of twenty minutes, during which the patient remained unconscious) had occurred before oxygen inhalations could be resorted to. Consciousness returned immediately. Four more paroxysms occurred, but they were considerably milder, and separated by the intervals of absolute comfort; indeed, the patient took her tea and dinner between the eclamptic fits. She made a rapid recovery. Encouraged by his success, Dr. Favr enthusiastically invites all professional brethren to give a trial to so simple a weapon against so formidable a foe, and even goes so far as to ardently hope that in a near future oxygen-gasometers will be found in all lying-in hospitals, side by side with forceps, cranioclast, cephalotribe, and other necessary instruments.

4305. *Sznabl on the Treatment of Rachitis by Phosphorus.*—Dr. Sznabl (*Medycyna*, No. 1, 1885, and *Vratch*, No. 4, 1885) treated forty cases of rachitis by the internal administration of phosphorus (as recommended by Kassowitz), and almost invariably met with successful results. The fontanelles rapidly closed; curvatures of the spine and limbs disappeared; chronic diarrhœa ceased; the appetite improved. As a rule, from six to ten centigrammes were sufficient to obtain a cure; in several cases, however, about thirty centigrammes were taken. Phosphorus seemed to retard dentition.

4306. *Genkin on Turpentine-oil in Diarrhœa.*—Dr. Genkin, of Kaluga, states (*Proceedings of the Kaluga Medical Society*, 1884, and *Vratch*, No. 12, 1885) that the treatment of dysentery and summer diarrhœa by the administration of castor-oil, and then of turpentine-oil, from ten minims to a teaspoonful at a time, in milk, gave in his hands far more satisfactory results than the use of opium. It is worth while to note, however, that of fifty-nine patients treated by turpentine-oil, in seven the remedy produced an injurious influence on the uropoietic organs.

4307. *Rüsanoff on the use of Cod-liver Oil in Hemeralopia.*—In the *Vratch*, No. 16, 1885, p. 253, Dr. N. N. Rüsanoff, of Novokhopersk, Voronej Government, writes that, from his five years' practice amidst poor peasantry, he concludes that yellow cod-liver oil presents a sure remedy for hemeralopia (the Russian popular designation for which is 'hen-blindness,' *kürinaia slĕpota*). As a rule, half a pound of the oil, taken in two days, cures the ailment. In some cases, the dose must be repeated. The remedy failed to bring cure only in two of the numerous cases treated by the author. In view of the beneficial results of the treatment, as well as in view of absence of any ophthalmoscopic changes, Dr. Rüsanoff admits that hemeralopia is a manifestation of bad general nutrition of the system.

4308. *Scheffer on Washing out the Stomach in Intestinal Obstruction.*—In the *Vratch*, No. 14, 1885, p. 217, Dr. L. D. Scheffer, of Ranenburg, details the case of a strongly built and previously healthy peasant, aged 49, who was admitted to the Zemsky Hospital with four days' intractable constipation, vomiting, white-coated tongue, great thirst, hiccough, great abdominal tension, and umbilical pain, hardly perceptible pulse, 122, general weakness, and sleeplessness. Like Dr. Makushin (*see* the London Medical Record, April 1885, p. 148), the author resorted to Kussmaul's method of the treatment of intestinal obstruction. During the first day, washing out the stomach was repeated three times at seven and five hours' intervals. After the third sitting vomiting ceased, and nine hours later (on the sixth day of the disease, and the second of the treatment) scanty dark-brown stools followed. About an hour after the defæcation, a fourth washing out was made, eight and twelve hours after which free evacuations of the bowels ensued. The last stools contained numerous ascarides. The administration of santonine expelled a score more of worms. The patient made a rapid recovery. Dr. Scheffer is inclined to think that intestinal obstruction in the case above was caused by ascarides. V. Idelson, M.D.

4309. *Pierd'houy on Scopolein as a Mydriatic.*—Dr. Pierd'houy finds that scopolein, an alkaloid derived from the *Scapolia japonica*, dilates the pupil more quickly than atropin, the greatest amount of mydriasis and accommodative paresis being obtained in forty-five minutes, the same degree being reached with atropin in seventy minutes. After one hour and a quarter the effect of atropin exceeds that of scopolein, but this does not last long; and even on the third day the pupil is more dilated in the eye in which the scolopein solution has been instilled. The contraction of the pupil is not overcome by eserine, as it is when due to atropin. In one case of chronic iritis in which atropin and duboisin caused so much pain and redness that cucain had to be used simultaneously, scopolein acted well and painlessly. Scopolein was also used for seven days in a case of accommodative spasm. In many cases its quick and moderate action, which is yet more constant and lasting, will lead to its employment in preference to atropin. G. D'Arcy Adams, M.D.

4310. *Lurtz on Lactic Acid as an Escharotic.*—Professor von Mosetig-Moorhof recently called attention to the value of lactic acid, hitherto used only in the treatment of dyspepsia, and for the solution of false membranes, as a local application in lupus, and in superficial epitheliomata and papillomatous growths. Dr. Lurtz now publishes (*Wiener Med. Blätter*, No. 19, 1885) the results of the treatment of a number of cases of lupus by a plaster composed of equal parts of glacial lactic acid and powdered silicic acid, spread on gutta-percha tissue, and covered by a layer of wadding. Several of the cases were of one or two years' duration, and one had recurred three times after extirpation with the knife. The paste was applied to the parts previously well washed, and retained *in situ* for twenty-four hours, the application being repeated three or four times at intervals of several days in some cases, but in others only once and followed by iodoform vaseline. A sensation of burning, but by no means intolerable, was felt for about an hour. In all, healing followed speedily, a smooth cicatrix being left at the end of three or four weeks, and no return of the disease appearing after six to nine months' observation. The advantage presented by lactic acid over other caustics is that it attacks only the unhealthy tissues, leaving not only the underlying healthy structures but even the bridges and islands of sound skin intact. It is true that Hebra's modification of Cosme's arsenical paste acts in much the same way; but it causes intense pain, and occasionally symptoms of poisoning, from both of which objections lactic acid is free, and the resulting cicatrices are far less unsightly. E. F. Willoughby, M.B.

4311. *Marcano on Peptonisation.*—The following communication to the Académie des Sciences, by M. Marcano (*Der Fortschritt*, April 20), may prove of practical value. By adding to finely minced meat a small quantity of the fresh juice of certain plants, *e.g.* of the Agave, and keeping this mixture at a temperature of 39–40° C. (102°·2–104° F.), fermentation and at the same time evolution of inodorous gases will immediately take place. In thirty-six hours all the fibrine will have disappeared, and a fluid will have formed, containing peptone, the weight of which after desiccation in a stove will be equal to the fifth part of that of the meat. This fermentation is probably due to the presence of a micro-organism, in the same manner as peptonisation of the gluten of flour results from the action of a bacterium during the fabrication of bread. As a proof of this view, it is asserted that no fermentation will take place if the juice of the plant have previously been saturated with chloroform; and further, that ferment-fungi can be produced by the addition of a few drops of the juice of the Agave to a solution of sugar in water. These fungi have the property of completely dissolving the fibrine in water. Other fruits and vegetable juices possess like properties. The action of the juice of the papaw (Carica Papaya) is comparatively weaker than that of other plants which do not contain a digestive substance similar to pepsine. M. Marcano believes that this new method of peptonisation will offer a cheap and simple mode of rapidly obtaining pure peptones; and he hopes that it will practically prove useful on a large scale for the exportation of meat from South America in a more convenient and more nutritious form than that of the extract.

4312. *Hager on the Cause of the Reddening of Carbolic Acid.*—Hager (*Der Fortschritt*) until lately agreed with the general view explaining the reddening of carbolic acid by the presence of a minute quantity of iron. His recent researches, however, lead him to the opinion that this change of colour of carbolic acid may most probably be due to the formation in the phenole of new compounds nearly allied to the Coralline and Tropæoline compounds, in consequence of the action partly of atmospheric ammonia-producing amides, partly of ozone.

FERD. AD. JUNKER, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

4313. SCHUMACHER.—The Natural History and the Treatment of Syphilis. (*Reprint from Jour. of Cutaneous and Venereal Diseases*, No. 5, 1884.)

4314. OTIS.—Clinical Lecture on Syphilitic Sequelæ (Tertiary Syphilis) resulting from Syphilis acquired in Utero. (*Philadelphia Med. Times*, Nov. 1, 1884.)

4315. VAN HARLINGEN.—A Case of Chancre of the Eyelid produced by Inoculation through a Contused Wound. (*The Polyclinic*, Nov. 15, 1884.)

4316. WEISSE.—Do we produce avoidable Pain and Complications in the Diagnosis and Treatment of Stricture consecutive to Gonorrhœal Urethritis? (*New York Med. Record*, Dec. 20, 1884.)

4317. STRAUS.—On the Virulence of the Bubo which accompanies Soft Chancre. (*La France Médicale*, 1884, p. 1784.)

4318. ANDRET.—The Cutaneous Manifestations of Gonorrhœa. (*Thèse de Paris*, and *Annales de Derm. et de Syph.*, No. 11, 1884.)

4319. MESNET.—Gonorrhœal Erythemata. (*Thèse de Paris*, and *Annales de Derm. et de Syph.*, No. 11, 1884.)

4320. GANGOLPHE.—On Gummy Osteomyelitis of the Long Bones. (*Lyon Médical*, Nos. 49–52, 1884.)

4321. LOUCACHEVITCH.—The Treatment of Acute Gonorrhœal Orchitis by the Application of Clay to the Scrotum. (*Vratch*, No. 31, 1884; and *Annales des Maladies des Organes Génito-Urinaires*, Jan. 1885.)

4322. CHAMERON.—The Treatment of Gonorrhœa by Injections of Corrosive Sublimate. (*Annales des Maladies des Organes Génito-Urinaires*, Jan. 1885.)

4323. AUBERT.—Gonorrhœa Insontium. (*Lyon Médical*, and *Annales des Maladies des Organes Génito-Urinaires*, Jan. 1885.)

4324. LANE.—Suppuration in Joints in Congenital Syphilis. (*Lancet*, Jan. 24, 1885.)

4325. CHURTON.—A Case of Early Syphilis of the Nervous System. (*Lancet*, Feb. 7, 1885.)

4326. BRISTOWE.—On Visceral Syphilis. (*Lancet*, Feb. 20 and 28, 1885.)

4327. LUCAS.—Gonorrhœal Rheumatism in an Infant, the Result of Purulent Ophthalmia. (*Brit. Med. Jour.*, Feb. 28, 1885.)

4328. WRIGHT.—The Treatment of Gonorrhœa by a New Drug. (*Lancet*, Feb. 28, 1885.)

4329. LUSTGARTEN.—The Bacillus of Syphilis. Translated by Dr. Bloom. (*Lancet*, April 4, 1885.)

4330. HEBRA.—Treatment of Soft Chancre by Salicylic Acid.

ART. 4315.—*Van Harlingen on a Case of Chancre of the Eyelid, &c.*—In this case (*Polyclinic*, Nov. 15, 1884) syphilis was communicated by one person sucking a wound of the cutaneous surface of the lower eyelid in another. Confrontation showed that the person who sucked the wound was syphilitic, and had mucous patches in the mouth. The author remarks that enlargement of the pre-auricular gland is the sign most to be depended on in making a diagnosis of such cases.

4316. *Weisse on the Diagnosis and Treatment of Stricture.*—The author thinks that, in cases of stricture following gonorrhœa, there is no need to pass any instrument beyond the triangular ligament. For diagnosis, Otis's bulbous sounds with slender graduated inflexible stem are recommended; and for dilatation, a similar instrument, but with a much more elongated bulb. By such an arrangement dilatation is limited to the part of the urethra where it is required, and irritation of the healthy portion, which is caused by an instrument of the same thickness throughout, is avoided.

4317. *Straus on the Virulence of the Bubo which accompanies Soft Chancre.*—M. Straus begins his paper (*La France Médicale*, 1884, p. 1784) with a reference to the views of Ricord on the occurrence of two kinds of bubo with soft chancre—namely, the sympathetic and the virulent bubo; and to his explanation of the fact that the latter variety, though not always virulent when first opened, afterwards became so by the liberation of virulent material from the interior of the affected gland, and consequent inoculation of the more superficial tissues, which previously had only been in a state of simple suppuration. To this explanation of M. Ricord's, M. Straus takes exception, and bases his conclusions on forty-two cases of bubo in connection with soft chancre observed by him among M. Mauriac's patients in the Hôpital du Midi. Some of these buboes were in an early stage of development; others were more advanced; and others, again, were ready to break, but in no case was the bubo already discharging before the observations were made. In none of the forty-two cases could M. Straus discover any micro-organism, either in the pus of the bubo or in sections cut from its walls. Further, in no case did the inoculation of pus taken from the bubo immediately after incision give rise to a soft chancre. In these experiments, every precaution was taken to avoid contamination of the inoculated punctures. The skin was cleansed, the knife was passed through a flame, and the point of inoculation was carefully protected. In some of the cases, pus from the original chancre was also inoculated with similar precautions; and in all instances these latter inoculations gave a positive result, while inoculation of the pus from the buboes was never successful. In some of the cases, again, the gland at the bottom of the bubo was itself incised, and the pus collected from its interior by means of a fine tube, but this pus also proved to be non-inoculable. M. Straus concludes from these experiments that there is no such thing as a *primarily* virulent bubo. The explanation of Ricord's results and those of others who have followed him is, according to M. Straus, to be looked for in accidental contamination with the pus of the original sore, from want of due protection either of the bubo or of the experimental inoculation-wound. In none of M. Straus's cases did the discharge of the bubo become virulent nor its edges chancrous, when proper precautions were taken against contact with the secretion of the original chancre. It would thus appear that there are not two kinds of bubo accompanying the soft chancre. Such buboes are never virulent in themselves; they only become so by secondary inoculation after opening.

4318. *Andret on the Cutaneous Manifestations of Gonorrhœa.*—M. Andret affirms (*Thèse de Paris*, and *Annales de Derm. et de Syph.*, 1884, No. 11) that gonorrhæa may cause erythema of a nodose or papular kind and a rash resembling scarlatina. The author reports a case of 'scarlatiniform erythema,' and attributes such eruptions to the specificity and virulence of gonorrhœa, which, in his opinion, is a parasitic disease, depending on the presence of a special micro-organism.

4319. *Mesnet on Gonorrhœal Erythemata.*—M. Raoul Mesnet, like M. Andret, also looks upon gonorrhœa as a parasitic disease (*Thèse de Paris*, and *Annales de Derm. et de Syph.*, 1884, No. 11), and, as such, liable to affect the skin like other infectious maladies. The greater part of the rashes commonly attributable to copaiba and similar drugs the author considers to be really due to the gonorrhœa itself. Balsamic drugs alone, he maintains, cannot cause erythema, because they do not do so when given in other diseases than gonorrhœa; nor can the continuance or return of the eruption be procured by the administration of the drug even in large doses. Gonorrhœal eruptions are polymorphous (nodose, scarlatina-like, measles-like, &c.), and generally occur only in patients who have other symptoms of infection. They are usually accompanied by fever, and sometimes by a general condition of some severity. These eruptions cannot be dependent on reflex vaso-motor disturbance, which Lewin believes to be their cause; they are probably due to the presence of the gonorrhœal micro-organisms in the skin.

4320. *Gangolphe on Gummy Osteo-myelitis of the Long Bones.*—The following are the conclusions arrived at by M. Gangolphe from a study of thirty-six cases collected by him from various authors (*Lyon Médical*, 1884, Nos. 49-52). The rarity of recorded observations of gummy osteo-myelitis of the long bones appear to be due to insufficient search for it after death. The lesions are usually multiple, and are of frequent occurrence, at least, in a latent condition. Examined by the unaided eye, bones affected by gummy osteo-myelitis are characterised by their porous worm-eaten appearance; by holes and tunnels extending from beneath the periosteum to the medullary canal, which itself is generally dilated; by the reddish-yellow or golden-yellow colour of the material which fills the intra-osseous cavities and sinuses; by their dryness; and by the rarity of sequestra of any size. Histologically, such bones are distinguished by (1) the presence of a fibrillary adenoid tissue, containing in its meshes a considerable quantity of small cellular elements, part of which is in process of undergoing granular degeneration; at the periphery of the lesions there is frequently sclerosis; (2) by the absence of marked lesions of the vascular system. From the hæmatopoietic function of the marrow, these lesions may be considered as resembling those of glands and of the spleen. Tertiary syphilis, by its local manifestations, leads to fragility of the bones; but the occurrence of atrophy or general rarefaction of the skeleton is not yet proved.

4321. *Loucachevitch on the Treatment of Acute Gonorrhœal Orchitis by the Application of Clay.*—The white clay used by modellers is made into a soft paste with water. The paste is spread to about the thickness of one's finger on a square piece of linen. An assistant then raises the scrotum while the surgeon applies the dressing, which ought to cover the whole of the affected half of the scrotum as far as the root of the penis. Slight pressure is applied so that the clay may be adapted perfectly to the affected organ. The patient remains in bed wearing a suspender and with the thighs apart. As the paste retains moisture for a long time it is only necessary to renew the dressing morning and evening. The author states that the acuteness of the pain subsides in ten minutes after the application of the dressing and very soon pain disappears altogether. In two or three days the testis begins to diminish in size. The applications are to be continued for five or six days. Dr. Loucachevitch states that he has treated twenty-six cases by this means alone, and that recovery has always been rapid.

4322. *Chameron on the Treatment of Gonorrhœa by Injections of Corrosive Sublimate.*—A thesis on this subject was presented to the Société de Thérapeutique by M. Constantin Paul, the author being one of his pupils (*Annal. des Mal. des Organes Génito-Urinaires*, January 1885). Gonorrhœa must be definitively placed among infective diseases because of the presence of an organism which is capable of cultivation. M. Chameron has carried cultivation of the 'gonococcus' to the ninth generation in M. Pasteur's laboratory. With the fluid of a ninth culture, M. Paul produced a urethral discharge in four or five days, but it only lasted two days. The organism is destroyed by a solution of corrosive sublimate, 1 in 20,000, provided the injection be used warm, as it is thus better able to penetrate into the urethral follicles. By this means, M. Paul says, gonorrhœa in men may be cured in seven days at most. In the discussiòn which followed, M. Martineau remarked that in women he used douches of corrosive sublimate (1 in 500). In cystitis he had used urethral suppositories, 2 centimètres long, containing not more than 6 milligrammes of sublimate. Moreover, as gonorrhœa with its micrococcus always penetrates into the urethral and periurethral follicles, M. Martineau also cauterises these with a very fine-pointed galvanic cautery. Under such treatment gonorrhœa in women may be cured in a fortnight or three weeks. M. Dujardin-Beaumetz thought it should be ascertained whether the gonococcus was not present in all purulent discharges in women. M. Moutard-Martin asked why M. Martineau used a solution of the strength of 1 in 500 if, as M. Paul had affirmed, a strength of 1 in 20,000 were sufficient to destroy the micro-organism.

4323. *Aubert on Gonorrhœa Insontium.*—Under this title M. Aubert of Lyons (*Lyon Médical*, and *Annal. des Mal. des Organes Génito-Urinaires*, January 1885), includes those cases, principally met with in children, in which the person infected is innocent and ignorant, and in which there is no bad intention on the part of the person who is the source of infection. In M. Aubert's opinion the presence of the 'gonococcus' of Neisser is the only true test of gonorrhœa, and the presence of that organism in any discharge proves that the discharge is due to contagion and not to ordinary causes. In more than 200 cases of urethritis in men, the author never found gonococci in those who had not been exposed to contagion. In cases of purulent ophthalmia in infants, the same rule applies. The presence of the 'gonococcus' means specific gonorrhœal contagion. The reason why purulent ophthalmia is so much more common than purulent vulvitis in newborn children is the large proportion of cases of head-presentation, in which the face is of course much longer in contact with the vaginal mucous membrane of the mother. In boys, even in cases of breech-presentation, the long narrow prepuce is usually a sufficient protection. After birth, the chances of accidental communication of maternal gonorrhœa to the eye or vulva of the child through the use of contaminated linen, sponges, &c., are about equal.

4324. *Lane on Suppuration in the Joints in a Case of Congenital Syphilis.*—Dr. Carrington read for Mr. Lane, before the Pathological Society of London (*Lancet*, Jan. 24, 1885), notes of the case of an infant, eight weeks old, who had had snuffles and a specific eruption all over the body. There was much emaciation. Treatment by mercury and stimulants was unsuccessful. During life, only the left elbow-joint was swollen. After death, suppuration was found in the right hip and shoulder joints, and in both elbows, all of which were distended with pus. The ribs were beaded; there was no softening to be detected between the epiphyses and diaphyses. The changes were most marked about the humerus and ulna of the right elbow. No suppuration of the thymus was found. There was a firm yellowish-pink gumma in the upper lobe of the right lung, and in the liver were one or two whitish patches of doubtful nature. A somewhat similar case was recorded by Dr. Lees in the *Clinical Transactions* for 1880.

4325. *Churton on Early Syphilis of the Nervous System.*—Dr. Churton read before the Leeds and West Riding Medico-Chirurgical Society (*Lancet*, Feb. 7, 1885), notes of the case of a man, of dissolute habits, aged 24, who had had a chancre four months previously. Two months afterwards he had sensory disorders in his right foot, spreading to the whole limb, and shortly after to the left limb; he also staggered in walking. A month later the hands became affected; he could not distinguish any object with accuracy by the sense of touch. When admitted into the Leeds Infirmary, he seemed dazed and gave varying replies. He could not walk at all, nor stand alone even when watching his legs. The plantar and patellar reflexes were absent. Muscular power was somewhat feeble; there was no special wasting of the muscles. Under treatment by mercurial inunction, rest, and abstinence from alcohol, the man had in three weeks so much improved that only slight symptoms of ataxy remained.

4326. *Bristowe on Visceral Syphilis.*—The *Lancet*, Feb. 21 and 28, 1885, contains a paper by Dr. Bristowe, in which are reported five interesting cases of tertiary syphilis. Case 1. Tertiary syphilis; obstruction of abdominal vena cava with great dilatation of veins in the walls of the chest and abdomen; large and nodulated liver; affection of left elbow and knee; incomplete recovery. This case, that of a woman, aged 42, was at first thought to be one of malignant disease. Marked improvement took place under mercury and iodide of potassium. Case 2. Tertiary syphilis; symptoms of a mediastinal tumour, with obstruction of superior vena cava or both innominates, removed under the influence of antisyphilitic treatment. This patient was a labourer, aged 43, and had had syphilis in 1857. Case 3. Tertiary syphilis affecting testicle, glands of neck, clavicle, knee, sacro-iliac synchondrosis, &c., and simulating malignant disease of these parts. The patient, a man, aged 28, was for a time thought to be suffering from disseminated cancer. There was no history of syphilis. Recovery under specific treatment seemed to be complete. Case 4. Tertiary syphilis, enlarged liver and spleen; ascites; later, paralysis of portio dura. The patient was a prostitute, aged 30. Incomplete recovery took place under iodide of potassium and mercury. Case 5. Tertiary syphilis; enlargement of glands in neck and of testicle; albuminuria. In this case, that of a butcher, aged 36, the history was obscure, and the man did not acknowledge having had syphilis. He was relieved by specific treatment. Dr. Bristowe remarks that there is one matter of great practical importance brought into prominence by most of the cases; namely, that tertiary syphilis may be present in the most aggravated form in adults who are perfectly ignorant of having ever had either primary or secondary symptoms of the disease, and who present no discernible traces of any such antecedent affections.

4327. *Lucas on Gonorrhœal Rheumatism in an Infant, the Result of Purulent Ophthalmia.*—Mr. R. C. Lucas relates (*Brit. Med. Jour.*, Feb. 28, 1885) the case of a child, 18 days old, who was suffering from purulent ophthalmia, together with effusion into the left knee-joint, and synovitis of the left wrist-joint, which creaked when moved. The mother said that about a fortnight before delivery she became the subject of a thick purulent discharge. Mr. Lucas says there cannot be the slightest doubt that the child's eyes were inoculated during delivery, and that he has no doubt also that this was a case of gonorrhœal rheumatism, consequent upon absorption from the conjunctival surface.

4328. *Wright on the Treatment of Gonorrhœa by a New Drug.*—The new drug here referred to (*Lancet*, Feb. 28, 1885) is jacaranda lancifoliata, a plant indigenous in Columbia, South America, and used by the natives for venereal diseases. This drug, in Mr. Wright's hands, has proved most efficacious in diminishing pain and stopping discharge in acute cases; while it has been successful in several cases of gleet which had resisted previous treatment. A liquid extract is made from the leaf, and may be given in doses of 20 to 30 minims three or four times daily.

4329. *Lustgarten on the Bacillus of Syphilis.*—In this paper, translated by Dr. Bloom (*Lancet*, April 4, 1885), Dr. Lustgarten says his researches with syphilitic products have led to the discovery of micro-organisms, which until now were unknown, which are constant in their appearance, and which are thoroughly characteristic. They appear as straight or curved, and sometimes irregularly bent rods, on an average from 3½ to 4½ micro-millimetres long, and from ¼ to $\frac{3}{10}$ thick. The bacilli were never seen lying free, but always enclosed in cells. The author's method of preparing his specimens consists in a process of bleaching sections, hardened in alcohol and stained with gentian-violet, by means of permanganate of potash and sulphurous acid. By his method, which is explained in detail, the author states that the bacilli of syphilis, leprosy, and tuberculosis are not decolorised, while all other bacteria are. The bacilli of syphilis, however, are decolorised by nitric and hydrochloric acids, and are thus distinguished from those of leprosy and tubercle, which are not decolorised by these acids. The author has examined, by his method, sections of two initial lesions, a lymphatic gland, three papules, and four products of the tertiary stage ; also the secretion of three initial lesions and of three moist papules. In all these cases (sixteen) the author found the bacilli, and on the strength of them remarks that 'the proof of the presence of the bacillus in syphilitic products is of equal diagnostic importance to that of the tubercle-bacillus in the sputum.' Further, 'in the future the question as to whether a given case is syphilis can only be affirmatively answered if the presence of the specific bacillus can be demonstrated.'

Arthur Cooper.

4330. *Hebra on Treatment of Soft Chancre by Salicylic Acid.*—After washing the penis with luke-warm water and soap, and drying it well, the powdered acid is applied to the sore and its edges, and maintained in place by means of a pledget of cotton-wool. The application is renewed after twenty-four hours, and on the third day simple ointment is used instead of the acid. Twelve hours later, the eschar disappears, and after about three days the sore is healed. J. S. Keser, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

4331. Fenoglio.—Epilepsy ; Injury of the Right Motor Zone ; Trephining. (*Lo Sperimentale*, Dec. 1884.)

4332. Likhonin, N. O.—On some Phenomena of Hypnotism. (*Vratch*, 1885, No, 10, p. 148.)

4333. Beevor.—Paralysis Agitans without Shaking. (*Brit. Med. Jour.*, Feb., p. 383.)

4334. De Watteville.—The Cure of Writers' Cramp. (*Brit. Med. Jour.*, Feb., p. 323.)

4335. Ballard. — Severe Tetanic Symptoms from Dental Irritation : Recovery. (*Brit. Med. Jour.*, April, p. 836.)

4336. Rosenthal.—On Reflexes. (*Centralbl. für die Med. Wissensch.*, No. 5, 1885.)

4337. Massalongo.—Posthemiplegic Hemiathetosis. (*Gazz. degli Ospitali*, Aug. 1884, No. 62.)

4338. Baillarger.—The Cadaveric Nature of some Lesions of the Nervous Centres. (*Annales Médico-Psychol.*, No. 1, 1885)

4339. Quinquaud.—On Nerve-section.

4340. Osler.—A Contributi on to Jacksonian Epilepsy and the Situation of the Leg Centre. (*Amer. Jour. of Med. Sciences*, January.)

Art. 4331. *Fenoglio on a Case of Epilepsy ; Injury of the Right Motor Zone.*—Prof. Fenoglio, physician to the Cagliari Hospital, relates the case of a young man, aged 24, who, four years previously, had received an injury to the fronto-parietal portion of the skull. Up to the time of the injury he had so far as is known been in good health. About four hours after the blow he partly recovered his senses ; the left half of the body was then completely paralysed. Some pieces of bone were removed from the wound. The intelligence gradually cleared, and was perfectly recovered between the seventh and eighth month. Sensibility also began to return ; and the paralysis to diminish slightly. Two months before he came under Prof. Fenoglio's care, he began to have severe epileptic attacks. Prof. Fenoglio found a small depression in the right fronto-parietal region. In view of the favourable results obtained in traumatic epilepsy by trephining, the operation was decided upon. It was performed by Prof. Desogus with antiseptic precautions. A piece of bone was found compressing the brain ; the dura mater, however, appeared to be perfectly normal. The movements of the brain with circulation and respiration were regular. A curious circumstance was observed during the operation. When the carbolised water was allowed to fall on the dura mater, the pulse ceased at the wrist on the opposite side. In dressing the wound, a plug of carbolised wadding was employed to support the soft parts. The patient was depressed in spirits, and continued to have epileptic seizures until the plug was removed on the third day. He then at once became buoyant and hopeful, and for eighteen days did not have any recurrence of the epilepsy. Then there were three fits on one day, accompanied by melancholy and a sense of fear. The patient during this time was gaining power in the paralysed limbs. That the epilepsy was not entirely cured, showed either that some permanent damage had been done to the nervous system, or that there was some source of irritation in addition to the one that had been removed by the operation. The conclusions drawn by the author from the case are as follows. 1. The motor zone in man may be considered the epileptigenous zone. 2. Irritation of this zone, even when covered by the meninges, may stop the radial pulse of the opposite side, probably by an action on nuclei of the vagus. 3. Even a light pressure on this zone may cause a series of seizures resembling the *status epilepticus*, but without any increase of temperature. 4. Compression of the motor zone does not give rise to disturbances of sensibility of the opposite side. 5. The position of the cicatrix, and the persistent contraction of the arm, are confirmatory of the view that the centre for this region is the middle portion of the central convolutions. 6. A lesion of the centre for the arm may give rise to irritation in the neighbouring centres ; so that there may be spasms in the muscles innervated by those centres. 7. Pressure on the motor zone, if it be extended, even though light, may give rise to marked change in character ; in other words, pressure will cause the patient to pass from good spirits to melancholia ; the removal of the pressure has the reverse effect. 8. The fear excited in the patient by compression of the motor zone, suggests the thought that pressure may be a factor in the production of this emotion.

William R. Huggard, M.D.

4332. *Likhonin on some Phenomena of Hypnotism.*—In the *Vratch*, No. 10, 1885, p. 148, Dr. N. O. Likhonin, of St. Petersburg, writes that, having made over two hundred experiments on persons of most varying description (as regards temperament, nutrition, general health, and so on), he came to the conclusion that the hypnotic state may be produced in the majority of human beings. As he thinks, the difficulty met in hypnotising after Braid's method (which is alone used by all hypnotisers) depends much upon the state of the optic apparatus of the person experimented upon. When hypnotism is induced by fixing a luminous object, while the eyes are kept in a state of strong convergent superior strabismus, the chief factor is a strong convergency of the eyes, and not the presence of a luminous object, since the hypnotism from artificial strabismus ensues also in the absence of any light stimulation of the retina (for instance, in darkness, or with shut eyelids). Hence, Braid's method is essentially unsuitable for producing the hypnotic state in persons with weakness of the internal straight muscles of the eye; for, before the hypnotic state may supervene, there is developed in such subjects a temporary incompetency of the internal recti with external strabismus, and thus the very necessary conditions for hypnotising are put in abeyance. From this consideration, it is evident that failure in hypnotising after Braid's method does not yet imply that the person experimented upon is altogether unable to fall into the hypnotic state. Passing to another point, the author repudiates Heidenhain's explanation of the hypnotic state (a gradual accumulation of peripheral stimulations within the cortical nerve-cells, with subsequent exhaustion and inhibition of their action), and states his belief that the hypnotic state is essentially allied with ordinary sleep, being dependent upon vaso-motor reflex leading to constriction of the vessels of certain parts of the brain. In support of his hypothesis, he points out—1. that hypnotic subjects left to themselves, after a while, awake spontaneously; and, 2, that the way of their awakening from external stimuli is quite identical with that of awakening of normally sleeping persons; cutaneous stimulation (blowing, spurting with water) leads to rousing, while noise, stamping, and light may remain inactive. Finally, the author confirms Richet's observation, that hypnotised persons open their eyes on pressure on the top of the head. V. Idelson, M.D.

4333. *Beevor on Paralysis Agitans without Shaking.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 383, an account is given of four cases of paralysis agitans without tremors, which were shown by Dr. Beevor at the Medical Society of London. The first case was a man, aged 49, who had felt weakness in the left arm five years previously, and subsequently in the leg and right arm. The attitude was fixed, the neck rigid, and the power of looking up limited; the countenance was expressionless; movements were slow, and delayed; the voice was monotonous, the utterance mumbling, effected by movements of the lips only. The position of the hands was typical. The second case was in a man, aged 62, who had the same characteristic symptoms as the first, and also had propulsion and retropulsion. In the third case, the patient had a symptom not previously noted in paralysis agitans; viz., on looking to the right or left the eyes moved first, and the head followed after a short interval. In the fourth case, the diagnosis was not so clear as in the other three; but there were no symptoms of disseminated sclerosis, or history of hemiplegia.

4334. *De Watteville on the Cure of Writers' Cramp.*—In the *Brit. Med. Jour.*, Feb. 1885, p. 323, Dr. De Watteville describes two cases of writers' cramp, which had failed to obtain any relief from treatment until they were placed under the care of Mr. Wolff. One was cured after four weeks, and the other after five weeks, by the method adopted. Mr. Wolff is a German by birth, and has earned a great reputation in his own country for the cure of writers' cramp by the application of massage and gymnastics combined. In 1881 Professor Charcot called Mr. Wolff to Paris, and placed two cases of writers' cramp under his care, the result being that both were well within three weeks of commencing the treatment. The massage consists in rubbing, kneading, stretching, and beating of the fingers, and the several muscles of the hand and arm, with or without the simultaneous assistance of elastic bands. The patient is obliged to have at least two sittings daily, lasting from twenty to forty minutes each. Mr. Wolff refuses to treat cases except under the responsibility of some qualified physician or surgeon.

4335. *Ballard on Severe Tetanic Symptoms from Dental Irritation: Recovery.*—In the *Brit. Med. Jour.*, April 1885, p. 836, Mr. C. Ballard records the case of a woman, aged 32, who had suffered from paralysis of the left lower extremity since the age of eleven months. Her general health had always been good; but when the author saw her she had a small ulcer near the ankle of the paralysed limb, and, in addition, she had a swelling in her mouth, probably an abscess connected with a bad tooth. When Mr. Ballard wished to examine the mouth, he found it impossible, as it was closed by well-marked lockjaw. There were distinct *risus sardonicus* and opisthotonos, as well as general spasm of the whole muscular system. She was treated with bromide of potassium and chloral-hydrate for two or three days; but no relaxation of the spasm was produced, though the patient slept well. After this no drugs were administered at all, though the bowels were well relieved by enemata. After about a week, severe bronchial symptoms set in. These were quickly relieved by doses of carbonate of ammonia, and the tetanus began to abate, so that the patient was able to take solid nourishment; and twenty-five days after she was first seen by the author the patient had completely recovered. The tetanus was supposed to have been produced by nerve-irritation from the abscess in the mouth.

Richard Neale, M.D.

4336. *Rosenthal on Reflexes.*—Starting from the observation of Helmholtz that the time of a reflex action is ten or twelve times as great as that necessary for conduction of an impulse along a peripheral nerve of about the same length, Rosenthal has further examined these facts, and has found that the time of a reflex action—*i.e.* from the moment of sensory irritation to the beginning of muscular action—varies extremely, being dependent both upon the *degree* of irritation and on its *site*. As regards the degree, it is well known that, when we irritate a motor nerve, the amount of muscular action provoked varies directly with the degree of irritation up to a certain limit, as we pass from minimal to stronger irritations. It is otherwise with sensory nerves. In order to provoke muscular action by their irritation, we must begin with a relatively strong irritation—a 'sufficient irritation.' The ensuing muscular action is then a pretty strong one; but, as the irritation increases, the time of the reflex becomes shorter, till it is as short as in Helmholtz's experiment. The time of a reflex depends also upon the site. If we alternately irritate a place near the spinal cord (*e.g.* the hip), and a more distant place (*e.g.* the foot), a smaller irritation will suffice to provoke contractions in the former than in the latter, while the time of reflex is less also. In regard to the place of transference of irritation from sensory to motor tracts within the spinal cord, Rosenthal, by longitudinal and transverse sections of the cord at various levels, has discovered the remarkable fact that a 'sufficient irritation' of sensory nerves joining the cord in the lumbar region, is transferred to the motor paths, not in this region at all, but in the highest part of the cervical region of the cord. But a stronger irritation may be transferred at lower sites. The above is true both for transverse conductions—*i.e.* for reflex movements on the side opposite the irritation, and for those cases in which reflexes occur on the side irritated. No application of these facts has been made so far in the explanation of pathological phenomena.

E. J. EDWARDES, M.D.

4337. *Massalongo on Posthemiplegic Hemiathetosis.*—Massalongo gives the case of a boy aged 6 who, at the age of 13 months, was seized with right hemiplegia. About eighteen months afterwards, electrical treatment was commenced, and the paralysis began gradually to diminish; but with this improvement appeared movements of extension and flexion of the hand, fan-like spreading of the fingers, &c.; continuous involuntary movements also occurred in the toes of the same side. The head was also bent towards the right shoulder, and turned towards it, with deviation of the eyes in the same direction. These movements did not cease during sleep, but much more limited. The diagnosis was, cerebral atrophy arising from cerebral hæmorrhage, right hemiplegia, hemiathetosis of the hand and foot and right half of the neck. According to the author, this case supports Charcot's hypothesis that athetosis is only a variety of posthemiplegic chorea.

G. D'ARCY ADAMS, M.D.

4338. *Baillarger on the Cadaveric Nature of some Lesions of the Nervous Centres.*—In a short paper with this title (*Annales Médico-Psychologiques*, No. 1, 1885) Dr. Baillarger shows himself disposed to question the statement of Dr. Plaxton, that miliary sclerosis is a change produced after death. He gives a fact which has recently been communicated to him, and which is of great interest. The following is a translation of Baillarger's own words. Some observations made with care tend to demonstrate that the adhesions of the membranes to the cortex cerebri, which are almost constantly found in the brains of patients who have died of general paralysis, are only produced after death, and that they ought, therefore, to be regarded as a cadaveric lesion. In five cases in which examinations were made less than ten hours after death, no adhesions were found.

W. W. IRELAND, M.D.

4339. *Quinquaud on Nerve-section.*—It is well known that after a nerve has been divided, in a few days it loses its motor sensibility. In a dog this happens four days after section, but it was not known in what progressive proportion this sensibility was lost. This has been determined by M. Quinquaud. He cut the nerve of a limb. The extremity of the limb was attached to a dynamometer; the nerve was stimulated by an electric current, and he ascertained the weight the limb was capable of lifting. He also observed that the motor force is not lessened until twenty-four hours after the section of the nerve. It then continues to diminish progressively during eighty hours after section, until the limb can barely lift a weight of 800 grammes. M. Quinquaud draws attention to the necessity of appreciating the value of two phenomena involved in the results of these experiments, one proceeding from loss of sensibility in the nerve, the other from loss of muscular force. If the muscle be directly stimulated, it is easily observed that the primary force is lessened. M. Quinquaud has thus ascertained that the motor excitability of the peripheral end of the nerve is not increased immediately after section, but remains normal during twenty-four hours afterwards.

W. VIGNAL.

4340. *Osler on Jacksonian Epilepsy and the Situation of the Leg-Centre.*—Dr. William Osler, of the University of Pennsylvania, records, in the January number of the *American Journal of the Medical Sciences*, the history of an instructive case of Jacksonian epilepsy, the main points of difference between which and true epilepsy are the slow onset, local in character, beginning in, or in mild attacks confined to, one limb or a single group of muscles; the gradual extension until the side is involved, or, in severe attacks, the entire body; loss of consciousness late, not early and sudden, as in true epilepsy; and, lastly, the muscular contractions are clonic. His case lasted over fourteen years, the convulsions beginning in the left hand; being at first monobrachial, then extending to the leg, afterwards becoming unilateral, and finally general, at first without loss of consciousness. For the first nine years of the illness there were remarkable intermissions, lasting for six or seven months, once an entire year. Six years after the onset, the left leg became weak and stiff. For four years, the tenth, eleventh, twelfth, and thirteenth of the illness, the seizures were frequent. During this period, there were six weeks of unconsciousness in which the spasms were very frequent, fifty to eighty in the day. Ten months prior to the final attacks, there was freedom from convulsions. The intellectual faculties were unimpaired. The case is unusual in the limitation of the lesion to the ascending frontal convolution and to its fasciculus of white matter, scarcely involving the grey substance, which is commonly affected in cortical epilepsy. The accurate localisation and the remarkable absence of tissue-changes in the immediate vicinity give the case the nature of an exact physiological experiment. With this limited lesion of the motor area, there was permanent paralysis with contracture of one extremity and epileptiform convulsions. Another feature of interest in the case is the light it throws on the situation of the leg-centre. The fibrous mass was situated entirely within the anterior part of the paracentral lobule, limited in extent, confined chiefly to the medullary fibres of the superior frontal fasciculus, and only touched the grey matter in places. A point to be referred to is the absence of the paralysis of the leg for the first six years; for, if the convulsions and monoplegia were caused by the same lesion, how is the late onset of the latter to be explained? From the fibroid state of the tumour, it might reasonably be inferred that it was originally larger and had shrunk; but the absence of puckering on the surface, and the way in which the margins merged with the contiguous parts, make it probable that the growth was always small; so small, in fact, that at one period of its development it may have caused sufficient irritation to induce the convulsions, and yet at the same time not involve the special fasciculi of white fibres to the extent of producing weakness of the leg, or monoplegia.

A MICRO-BIOLOGICAL LABORATORY.—A Russian journal announces that a laboratory will be organised in the Medical and Military Laboratory at Tiflis, especially adapted to the study of microbiology. Microscopes and the necessary instruments will be placed at the disposal of medical men and of those who wish to make researches on bacteria and other micro-organisms.

DISEASES OF CHILDREN.

RECENT PAPERS.

4341. Nikolsky, D. P.—On Resuscitation of Stillborn Infants after Le Bon's Method. (*Vratch*, No. 46, 1884, pp. 781–82.)

4342. Jacobi.—Catalepsy in a Child Three Years Old. (*Amer. Journ. of Med. Sciences*, April.)

4343. Tschernoff.—The So-called Fatty Diarrhœa of Demme and Biedert. (*Jahrbuch für Kinderheilkunde*, Band xxii.)

4344. Atkinson.—Treatment of Ulceration of the Bowels in Young Infants. (*Practitioner*, April 1885.)

4345. Adams.—A Case of Apparently Instinctive Appetite. (*Lancet*, Jan. 1885, p. 234.)

Art. 4341. *Nikolsky on Resuscitation of Stillborn Infants after Le Bon's Method.*—In the *Vratch*, No. 46, 1884, p. 781, Dr. D. P. Nikolsky reports six cases of asphyxia neonatorum treated with immersion in hot water (at 40° C., and even considerably more, since in one of the cases bullæ over the infant's buttocks appeared). In five of the cases the treatment proved most successful, respiration setting in after two, three, or four immersions (each of a moment's duration). In four of the successful cases, the hot-water bath was the first means employed; in the fifth case, Le Bon's method was resorted to after usual means had been fruitlessly tried for about twenty minutes. In the sixth case there happened to be no hot water at hand, and the bath was applied too late. In view of the last case, Dr. Nikolsky, who thinks of Le Bon's method as highly as Drs. Gatchkovsky (*see* the London Medical Record, June 1884, p. 261), Rodzewicz (*ib.*, Dec. 1883, p. 521), and Rusanovsky (*ib.*, May 1882, p. 199), insists on the necessity of the practitioner ordering hot water immediately after his arrival at the house of the parturient woman.

V. Idelson, M.D.

4342. *Jacobi on Catalepsy in a Child Three Years Old.*—In the April number of the *American Journal of Medical Sciences*, Professor Jacobi gives the notes of this interesting case. Fannie C., aged 3, was admitted into Mount Sinai Hospital, New York, on Sept. 4, 1879, for typhoid fever. On the 10th, she was discovered to have whooping-cough in addition. On the 17th she was free from fever, and up to the 23rd was considered in a fair way towards convalescence. On that day, however, a slight spasm of the eyelids was noticed; she coughed but little, though she cried a great deal. There were *râles*, with slight dulness at the right apex; pulse 102 and weak. The appetite continued good. On the morning of the 25th there was a good deal of twitching of the eyelids; the eyeballs were turned upwards tonically; occasionally there was divergent strabismus, but the lids were closed when asleep. When the arms were lifted, they would remain in any position in which they were placed; but, if directed in a loud voice to drop the arms, she would do so slowly. Her legs were in a similar condition. The arm could, with some force, be partly extended, partly flexed, and it remained in position. Still, there was some voluntary action left, for, when her arms were in a natural position, she would attempt to take a penny from the bed-clothes. Her muscular action, in general, was very deficient. When she was set up in bed, her head fell forward. The extremities were cold, and she was indifferent to surroundings; but, when aroused by strong impressions, the eyelids would cease twitching for a few moments. She passed a large quantity of urine of sp. gr. 1020. On Sept. 27 the patient was a little stronger; she sat up in bed; held her head erect while being fed; the twitching persisted; she could walk two or three steps. Sensibility to contact, pain, and temperature were entirely lost. She made no sign when pricked with a needle. The patellar tendon-reflex was greatly diminished; the eyes were staring; the appetite was ravenous. On Sept. 28 she answered questions. The eyeballs could be touched without producing twitching; sight was good. On Sept. 29 there was less twitching, and she appeared brighter. On Oct. 1, the cataleptic position of the arms was sustained for one minute; the anæsthesia and analgesia were the same; she still urinated very frequently; there was a small ulcer on the arm; no twitching was observed. On Oct. 3 there were reflex movements on pricking with needles; the bowels were relaxed. On Oct. 9, the surface was warmer; the urine was of sp. gr. 1015; it contained no albumen; temperature, 99. On Oct. 15, there was no patellar reflex, no reflex on tickling, no twitching. Henceforward the patient's condition improved, so that by Oct. 20 the cataleptic symptoms had entirely disappeared. She continued, however, weak and anæmic for a long time afterwards. In the concluding remarks it is further stated that the urine contained an excess of phosphates, but no sugar.

4343. *Tschernoff on the So-called Fatty Diarrhœa of Demme and Biedert.*—Dr. Tschernoff gives in the *Jahrbuch für Kinderheilkunde*, Band xxii., Heft 1, a large number of analyses of the stools of healthy and diseased infants. The fat in seven healthy children under 6 months old amounted to from 25 to 30 per cent. of the dried fæces. The average quantity in four dyspeptic children was 48 per cent. Two infants with erysipelas showed respectively 44 and 52 per cent., and the amount remained high long after their recovery. Two cases of catarrhal pneumonia gave 51 per cent. each, and another case 60 per cent. A child with bronchitis and nearly normal temperature showed 39 per cent.; another, with chronic diarrhœa, 42 per cent. A child, 9 months old, showed during an attack of scarlatina 57 per cent., and after recovery only 32 per cent. The next case was remarkable, for the stools, which were frequent, offensive, and whitish, contained, when dried, no less than 75 per cent of fatty matter; the child, aged 2 months, was icteric, with greatly enlarged liver and spleen. A wasted child, 6 months old, nursed by its mother, had diarrhœa, with slimy, blood-stained, offensive stools, which showed 50 per cent. of fat. After treatment, including the substitution of a wet nurse, the child recovered, and regained all its flesh, but the dried stools still showed 40 per cent. of fat. This case exemplifies the difficulty with which children regain their power of assimilating fat. In the experience of the author every disturbance of the digestive tract is accompanied by increased fat in the stools, and this increase is greater still if the temperature is raised. Even adults, when feverish, show an increase of 14 per cent. The quantity of fat in the food does not seem to affect the proportion in the stools

Ralph W. Leftwich, M.D.

4344. *Atkinson on Treatment of Ulceration of the Bowels in Young Infants.*—In the *Practitioner*, April 1885, Dr. F. P. Atkinson records a most obstinate case of vomiting and diarrhœa occurring in a child 2 years and 8 months old. When first seen, the child was a perfect skeleton, with a sallow, waxy appearance, without a particle of colour in its face except a hectic flush. Every time she took food vomiting was excited, and the bowels acted every four hours, the motions being extremely offensive, and composed of slime and pus, streaked with blood. The previous history was as follows. The child had been sickly from birth, but was worse after the first year. Ever since eight months old she had suffered from diarrhœa. The father once suffered from syphilis, but was perfectly well before marriage. The child was nursed for four months, then was brought up entirely on Swiss milk and Savory & Moore's food until it was twelve months old; then it had all kinds of milk, goat's, ass's, &c. After that, it was fed on farinaceous food, with a little Brand's essence of beef. When seen by Dr. Atkinson the child was taking cows' milk and lime-water, but this was vomited as soon as it was swallowed. The following diet was then ordered: two tablespoonfuls of whey, two of barley-water, and one of cream, to be taken at each feeding. In the course of twenty-four hours, it was found that five of these feeds had been taken and kept down, besides a little milk; the white of four eggs beaten up in water, four teaspoonfuls of Brand's essence, and two ounces of finely minced raw meat, were then added to the daily diet. The body was thoroughly oiled night and morning, and the patient was well wrapped up in flannel. The following mixture was also given three times a day: one minim of solution of potash, eight minims of castor-oil, three-quarters of a minim of tincture of opium, twenty minims of syrup of ginger, and half a drachm of mucilage. When the pus and slime began to pass away, the relaxation of the bowels was checked by the following: two grains of bicarbonate of soda, three grains of subcarbonate of bismuth, half a minim of tincture of opium, five minims of tincture of catechu, two minims of tincture of rhubarb, and five minims of compound tincture of cardamoms, every four hours. Later on, in order to improve the condition of the blood, ten minims of the concentrated syrup of lactophosphate of lime and iron were ordered three times a day. Under this treatment, together with attention to hygienic rules, the child, when four years old, was able to run about and eat the same food as other children.

4345. *Adams on a Case of Apparently Instinctive Appetite.*—In the *Lancet*, January, 1885, p. 234, Mr. Adams records the case of a child, aged 3 years, having a voracious and apparently instinctive appetite for mortar. The mother stated that the child was a fine boy until he reached the age of 2 years; then he had a bad attack of bronchitis, which left him weak, and soon afterwards he showed signs of rickets. About eight months before he was seen by Mr. Adams, the mother discovered that the boy exhibited a great desire for eating mortar. His eagerness to obtain it was so great that he would go out, even in bad weather, and pick it from the walls in the yard. If prohibited from eating the mortar, the child would vomit all his food, until he was again allowed to eat it. When the author wrote, the child was suffering from small-pox, and on waking up in the night, cried for a piece or two of lime before going to sleep again. The quantity consumed in twenty-four hours was rather less than half a teacupfull. The mother had not yet weaned him, as she always suckled her children until they were 3 years old. RICHARD NEALE, M.D.

MEDICAL CHEMISTRY.

RECENT PAPERS.

4346. LÉPINE, EYMONNET, AND AUBERT.—On the Proportion of Incompletely Oxidised Phosphorus contained in Urine, especially in certain Mucous Conditions. (Reprint from *Comptes Rendus de l'Académie des Sciences.*)

4347. ROY.—On Measuring the Specific Gravity of the Blood. (*Edin. Clin. and Path. Jour.*, April.)

4348. DESSALES.—Albumen in the Saliva and Bile of Albuminuric Patients. (*Riv. Clin.*, Fasc. vi., 1884, and *Annali Univ. di Med.*, Feb. 1885.)

4349. BRANCACCIO.—Considerations on the Researches for Albumen in the Saliva and Bile of Albuminuric patients of M. Dessales. (*Riv. Clin.*, Fasc. xii., 1884.)

4350. GROSSIC.—Indican in the Urine in Injuries and Diseases of Bones. (*Wiener Med. Blätter*, No. 20.)

ART. 4346. *Lépine, Eymonnet, and Aubert, on the Proportion of Incompletely Oxidised Phosphorus contained in Urine, especially in certain Mucous Conditions.*—Lépine, Eymonnet, and Aubert say (Reprint from *Comptes Rendus de l'Académie des Sciences*) that in man the urine contains, for every 100 parts of nitrogen in twenty-four hours, 20 parts of phosphoric acid in the form of phosphates, and usually less than 0·25 of free phosphoric acid. Hence the incompletely oxidised phosphorus is only about 1 per cent. of the total quantity. In a case of apoplexy the free phosphoric acid was 1·07, that in the state of phosphates being 21·6, or a fourfold proportional increase. In a case of epilepsy the proportions were 0·71 and ·81, or nearly threefold; in hystero-epilepsy 0·5 and 27·5, or double; and in delirium tremens 0·47 and 34·5. The hypodermic injection of morphia caused in a day great increase of both forms, the relative proportion remaining normal. The ingestion of bromide of potassium caused increase of incompletely oxidised phosphorus in a dog. In various nervous lesions, notably in meningitis, the incompletely oxidised phosphorus has been relatively reduced. In fatty liver of phthisis, in profound anæmia, and certain cases of typhoid fever, jaundice, and acute pneumonia, the proportion may be much increased; and no increase was observed in certain mild cases of measles and scarlatina.

4347. *Roy on Measuring the Specific Gravity of the Blood.*—Dr. C. S. Roy says (*Edinburgh Clinical and Path. Journal*, April 1884) that the only apparatus needed for measuring the specific gravity of the blood is an ordinary hypodermic syringe, the needle of which has been slightly altered, its point having been taken off, and the steel tube prolonged backwards, so that its inner end, where it is fixed on the syringe, is visible from without. Besides this instrument, there are required a number of solutions of salt or other suitable substance, of various densities from 1040 to 1075. For practical purposes, about a dozen and a half of such solutions are sufficient. 'The syringe having been half or three quarters filled with one of the salt solutions, a portion of a drop of the blood to be examined (obtained from the finger in the ordinary way) is drawn up into the syringe, care being taken that no air is introduced along with it. If, now, the blood be of greater specific gravity than the fluid in the syringe, it at once sinks to the lower part of the latter; while, if it be of less density, it at once rises to the upper part of the glass tube of the syringe. In the former case, having emptied the syringe, we repeat the process with a solution of higher specific gravity, and one or two trials enable us to find between what two solutions the drop of blood ceases to sink, and rises instead.' He says the difference of temperature gives rise to so small an error as to be disregarded.

ROBERT SAUNDBY, M.D.

4348. *Dessales on Albumen in the Saliva and Bile of Albuminuric Patients.*—Professor Semmola holds that the presence of albumen in the saliva and bile of patients suffering from chronic Bright's disease (in other forms of albuminuria it is not found) proves that the renal lesions are not primary, but secondary to the progressive enfeeblement of the respiratory function of the skin produced by the prolonged influence of damp cold. Dessales finds that, as Hoppe-Seyler showed, coagulable albumen is almost constantly present in the saliva, and that there are even normally great variations in the daily quantity of albumen in the saliva (Stokvis). He was careful, in his own researches, to examine the saliva for blood-corpuscles, so as not to fall into the error of attributing to the saliva albumen due to the presence of blood from aphthous patches of the gums. In nephritis, he found albumen either absent or only in very slight traces in the saliva ; in the bile it was sometimes present, sometimes absent. In other diseases (as paralysis agitans), the saliva contained considerable quantities of albumen. He concludes that in chronic Bright's disease there is no elimination of albumen by the saliva and bile, and that in Professor Semmola's cases the albumen in the saliva was due to his employment of hypodermic injections of pilocarpine ; and he quotes Vulpian, who says that after these injections the saliva becomes richer in albuminoid substances coagulable by nitric acid. He also gives three cases of his own, one suffering from nephritis and two healthy subjects, in all of whom, after hypodermic injection of pilocarpine, a large quantity of albumen was found in the saliva, though none was to be found before the injection.

4349. *Brancaccio on Albumen in the Saliva and Bile of Albuminuric Patients.*—Brancaccio does not think the conclusions of Dessales justified, his cases not being well chosen. He maintains that the albumen is increased in the saliva in Bright's disease. The action of pilocarpine in increasing the quantity of albumen in the saliva was known before his and Semmola's experiments. He also found that it always increases the albumen in the saliva in albuminuric patients.

G. D'ARCY ADAMS, M.D.

4350. *Grossic on Indican in the Urine in Injuries and Diseases of the Bones.*—Dr. Grossic (*Wiener Med. Blätter*, No. 20), while making observations on the temperature after fractures and operations on the bones, noticed that in all such, as well as in certain diseases, especially osteomyelitis, there was an appreciable increase in the excretion of indican in the urine. The more vigorous the subject, or acute the disease, the greater the amount of indican, and the earlier (second or third day) it appeared. In tubercular and feeble subjects it was not observed until perhaps as late as the tenth day. He believes that it may have some diagnostic value, inasmuch as if there be no increase of indican, there can be no injury or disease of the bones themselves.

E. F. WILLOUGHBY, M.B.

REVIEWS.

ARTICLE 4351.

Sappho. Memoir, Text, Selected Renderings, and a Literal Translation. By HENRY THORNTON WHARTON, M.A. Oxon. London. 1885.

Πάντα καθαρὰ τοῖς καθαροῖς.

WE shall make no apology for noticing this interesting book in a journal usually devoted wholly to medical subjects. It is the work of a rising young medical man, one of the not too numerous band who keep up the ancient connection between medicine and humane learning. And we may say at once that it is in every way most creditable to its author, a model of sober and sound criticism, a proof of ripe scholarship, and a mine of interesting literature in a very small compass.

A strange fate, indeed, is that of the only woman who has ever taken the highest rank as a poetess. Sappho is enthusiastically praised by every one who is competent to pronounce an opinion on her merits. Plato speaks of her as 'the tenth muse.' She has been translated and imitated by poets of every age and of every nation, from Theocritus and Catullus to Tennyson and Swinburne. From the father of history—Herodotus, to the latest maker of history—Gladstone, all the great sons of the muses have sate at her feet. Her name is a household word in every civilised country under the sun. Yet her works have utterly perished with the exception of two short odes—one incomplete—and a number of fragments, many of them only consisting of two or three words cited as illustrations of her dialect, and that dialect one of the most crabbed and archaic of all the various forms of Greek, scarce known to scholars, except from a few lyric remains. Still further, the fame of Sappho has been clouded by imputations for which her surviving works not only show no foundation, but which, on the contrary, they render incredible to any one who enters simply, and without preconceptions, into the spirit of her poetry. Adopting apparently some such preconceptions, one of the greatest English poets of our time has helped, as we think, to give us a totally false idea of the great poetess, and while affecting (nay, no doubt, desiring) to 'touch the keynote which was struck long since by Sappho,' has produced, as imitations or reminiscences of her poetry, things from which the poetess herself would, we believe, have recoiled.

The two odes of Sappho are well known. One is entitled 'To Aphrodite,' and the other is by Catullus headed 'To Lesbia.' The fragments are variously given by various editors. In this edition they amount to 170. None are more than three or four lines long, and many are single words or phrases quoted for grammatical or critical purposes. Those which form complete passages or stanzas are, many of them, of exquisite beauty, and the whole is enough to give a very perfect idea of Sappho's style as distinguished from that of other poets. It is a very marked and individual style; and strangely enough (considering the poetess's reputation) its chief characteristic is sobriety and restraint. The diction is direct, simple, and intelligible. The language is musical (even to our ears, to whom the true pronunciation is a problem) beyond almost any other lyrical verse, and a very favourite figure is the repetition of one or two emphatic words. The sentiments are everywhere, even in the most passionate poems, pure, noble, and marked by that self-restraint and love of virtue which the Greeks called *σωφροσύνη*—*i.e.* the mark of a sane mind. No better proof of this can be afforded than the Alcaic stanza, in which she gently rebukes some too forward admirer (who is said to have been Alcæus himself), and who hints at something which he says he was ashamed to speak. Sappho's reply (Fr. 28) is thus translated by our editor—'Hadst thou felt desire for things good and noble, and had not thy tongue framed some evil speech, shame had not then filled thine eyes, but thou hadst spoken honestly about it.' Or, as it is rendered (though rather feebly) in an old paper in the *Edinburgh Review*—'If aught of good, if aught of fair, Thy tongue were labouring to declare, Nor shame would dash thy glance, nor fear Forbid thy suit to reach my ear.' Sappho, in fact, as far as we can see from her authentic works, was penetrated by what she here calls '*ἔσλων ἴμερον ἦ κάλων*,' and our editor does well to quote (on Fr. 79) Clearchus' judgment, handed down by Athenæus, that 'Sappho being a thorough woman, and a poetess besides, was ashamed to separate honour from elegance, and speaks thus, making it evident to everybody that the desire of life that she confessed had brilliancy and honour in it; and these things especially belong to virtue.'

We live in cynical times, and it may seem absurd to be solicitous for the reputation of a contemporary of Jeremiah. Yet we would not willingly admit that the only woman who has ever been ranked as a great poet could have been the mixture of loquacity and 'lubricity,' which Mr. Swinburne's readers must think her. A study of her scanty remains is of itself almost enough to refute the idea. Nor is it difficult to understand how Sappho came to be so misrepresented. Müller[*] points out with incontestable force how the more corrupt society of Athens misunderstood the freedom and simplicity of manners which prevailed in ancient Lesbos, and how therefore it was 'natural that women should be the objects of scurrilous jests and slanderous imputations.' But in our times everything is brought to the test of actual proof, and, judging Sappho from the fragments which now exist, no one would condemn her. True it is, no doubt, that all the imputations against her were rife at a time when her works are believed to have been still extant in a tolerably complete form; and therefore it becomes us at this day to speak with all due reserve and hesitation. But it must be recollected, on the other hand, that we have no contemporary account of the great poetess. Herodotus, the oldest writer who names her, lived 150 years after her time, and the writers on whose testimony Sappho has acquired her present reputation were far later.[†] In those early days, when written records were very scanty, a famous personage soon became mythical, and popular legends easily prevailed and soon became exaggerated. The question, of course, must remain an open one; but it is strange, supposing that Sappho was really of the 'fleshly' school, that all proof of this should have perished, and all that has survived should be so pure and noble as to make any such charge incredible. To illustrate what we mean, we would ask any unprejudiced person to compare Sappho's 'Hymn to Aphrodite' with Swinburne's 'Anactoria,'[*] and say whether there is any similarity—nay, any possible communion of feeling—between the sweet simplicity, grave reticence, and severe grace of the old Greek poetess, and the unmeasured flow, heaped-up metaphors, and unrestrained self-abandonment of the English bard?

No doubt Mr. Swinburne is one of the greatest masters of verse who ever wrote in our language; no doubt also he is one of our most acute critics; and no doubt again he can write Greek verses almost better than any living man, now that our great writer of Greek—Shilleto—is no more. Strange, then, that much of his work should be so utterly opposed to all that the Greek poets admired and practised. Perhaps to those who have read anything of Greek poetry, it would be sufficient to turn to one passage of 'Anactoria,'[†] where may be found a nominative case separated from its verb by fourteen lines in which, according to our computation, are contained eighteen metaphors drawn from everything in heaven and earth and under the earth, and culminating in the 'mute melancholy lust of heaven.' Is there any resemblance between such raving as this and the sweet simple directness of Sappho? We may confidently hope that the present volume (in which every fragment that can be probably attributed to Sappho is given with an interpretation which will render every one of them intelligible even to those whose familiarity with Greek has succumbed to the lapse of time) will give the English public a more correct idea of a poetess, of whose work Mr. J. A. Symonds[‡] well says:—'It is Greek in its self-restraint, proportion, tact. We find nothing burdensome in its sweetness. All is so rhythmically and sublimely ordered in the poems of Sappho, that supreme art lends solemnity and grandeur to the expression of unmitigated passion.' The popular view of Sappho is chiefly taken from Byron's 'burning Sappho,' the papers by Addison in the *Spectator*, and possibly the epistle of Ovid, which Pope thought worth a paraphrase. Byron's epithet is in no way misplaced, and seems, in fact, adopted from Plutarch. Sappho's words do indeed burn, but it is with a clear, steady, and, we venture to add, pure glow. It is not merely that any immodesty of expression would be an inconceivable outrage on such exquisite and lofty diction, but that anything like hysterical passion or unbridled desire would be far below the dignity of a soul so self-restrained though so tender. We should not forget that Sappho's poetry is read in the light of the silly legends that have gathered round her name. The 'Lover's leap' is always in our way, and we are always thinking of the poetess as a fair, lovelorn damsel such as Addison describes, killing herself for the love of Phaon. It is enough to say about all this that there is no authentic proof that any such person as Phaon ever existed, and some critics believe the very name to be mythological. If the handsome boatman was a real personage, there is no proof that Sappho ever knew or addressed him. Certainly no line which has survived of her poetry gives any support to the tale, while it is equally probable that the poetess died at a tolerably advanced age, leaving a husband and children. How much of her poetry was intended to be in her own person, and what was fanciful or composed for others, it is impossible now to judge. The Epithalamia or wedding songs were of course of the latter kind. So in all probability the famous ode which Catullus imitated, and which Boileau and A. Philips translated,[*] was written in the person of a young man to his mistress (*εἰς ἐρωμέναν*). In the Ode to Aphrodite, however, if we accept Bergk's text, it must be admitted that the goddess is represented as addressing Sappho by name and promising her the love and the gifts of a female friend, but all, as far as we can judge, in perfect purity and honour. Other texts (as Gaisford's) are consistent with the idea that the object of Sappho's love was a man; but, if so, the love seems equally pure and honourable. 'To the pure all things are pure,' a maxim of St. Paul which our editor has wisely prefixed to this edition of an author whose destiny it has been to illustrate so exactly the other part of the apostle's saying—viz., that 'unto them that are defiled is nothing pure.' Surely it concerns all good women, and all who reverence womanhood, that the most famous poetess whom the world has yet seen should be judged by her own noble works rather than by the prurient fancies of men who lived long after her, and who were 'defiled' by the corruptions of a later age.

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[*] *Lit. of Ancient Greece* in the *Lib. of Useful Knowledge*, vol. i., p. 173.

[†] We need hardly say that no weight is to be attached to writers like Ovid, if Ovid was the author of the epistle of Sappho to Phaon. It is, after all, only an exercise on a theme, and in no way proves the truth of its subject.

[*] *Poems and Ballads*, 1868, p. 65.

[†] We refer to the passage on pp. 70, 71, beginning 'Or say what God.'

[‡] *Studies of the Greek Poets.* I., 129.

Nor has Sappho suffered less from her imitators than from her commentators. With a curious perversity (which surely can only be accounted for on the hypothesis that he spared himself the trouble of reading the original) Addison vouches that A. Philips's translation of the 'Hymn to Venus' has preserved every image and sentiment of Sappho; that in Catullus' imitation the other ode (that to Lesbia, as it is called) is rendered almost word for word, with the same elegance and the same turn of expression as in the Greek; that Boileau's rendering of the same piece gives all its poetry; and that Philips's is still more admirable. Mr. Swinburne, more justly, no doubt, though we should have thought a sense of his own performances in the same line might have made him more merciful, says of Catullus that he 'traduced,' not 'translated,' the original; that his poem is 'colourless and bloodless, puffed out by additions, and enfeebled by alterations'—a criticism which cannot but recall Juvenal's celebrated line about Verres denouncing theft and Milo homicide. With equal justice and equal mercilessness he says of Boileau and Philips that they have done into bad French and bad English the words of Sappho, and he might have added that their style is almost as remote from Sappho's as his own. It is not from these imitations or translations that an English reader can get any true idea of Sappho. In his imitation of Sappho Catullus is still himself—sweet, ingenious, musical, but trammelled by having to follow in another's footsteps, and limping in a way painfully unlike the bard who sang the loves of Acme and Septimius. Swinburne, again, is himself—rolling in a turbid flow that every sane reader would long to check,[†] abounding in fancy, rhythmical beyond any poet of our day, only too rich in conceits and metaphors, but as unlike Sappho as this age is unlike the old days of Lesbos. The smaller fry, *imitatores—servum pecus*, are neither one thing nor the other. They disgrace their high theme by ridiculous affectations and all the commonplaces of the lyrical theatre. The volume before us gives us a far better insight into the real Sappho by a literal translation of each piece into English prose, an aid not to be despised in so difficult a dialect even by those who have a good working knowledge of Greek, and still better for those who are not able to construe the original by excellent versions of most of the chief pieces by Mr. J. Addington Symonds, as well as some by Merivale and others, which will give to the English reader as just an idea of the poems, however inadequate that may be, as can probably be now obtained; while the numerous imitations which the editor has collected from Tennyson, Ben Jonson, Moore, Byron, and others are many of them of great beauty, and recall to us those exquisite fragments that have escaped the storms of ages and 'on the stretched forefinger of all time sparkle for ever.' Such is the lovely stanza about 'the stars around the moon' which Tennyson has adapted (Fr. 3), or about the lovesick maiden who can no longer weave her web (Fr. 90), which recalls 'My mother bids me bind my hair'; or the lines about Hesper (Fr. 95), which suggested Byron's 'O Hesperus, thou bringest all good things.' Another, and still more exquisite fragment is that in hexameters (Fr. 93), which we do not find in Gaisford, but which is to our ear almost more musical than Homer—the comparison of a young girl ripening for marriage to 'the sweet apple reddening on the top bough, the top of the very topmost, which the gatherers overlooked—nay, surely, not quite overlooked, but could not reach it.'[*] Out of this and another hexametric fragment (which can hardly have belonged to the same original poem) D. G. Rossetti made 'a combination' which certainly bears the palm amongst all the translations that are to be found in this work, and which we will quote as representing the style of Sappho as well as our language admits:—

Beauty—a combination from Sappho.

Like the sweet apple which reddens upon the topmost bough,
Atop on the topmost twig, which the pluckers forgot somehow.
Forgot it not—Nay, but got it not; for none could get it till now.
Like the wild hyacinth flower, which on the hills is found,
Which the passing feet of the shepherds for ever tear and wound,
Until the purple blossom is trodden into the ground.

A lovely translation of a far more lovely original, for which all the hyperboles which Mr. Swinburne pours out over both[†] seem hardly too much praise.

True, no doubt, it is that in a literal translation the naked thought looks cold, stripped of the music of the verse; that imitations, even by great poets, only show how one star differeth from another, and that Catullus or Tennyson or Rossetti were not Sappho, and could not reproduce her subtle charm. Still, a study of Mr. Wharton's volume will give some idea of the Greek poetess even to those who do not know her language; while to any one who has even a moderate knowledge of ordinary Greek he offers a complete interpretation of the little that is now left of that mighty treasure; and we are sure that no one will rise from its perusal without a better and more sober view of the author, nor without lively gratitude to the editor. His little book is an eminently graceful one, and we may say of it, as an old poet said, in the Æolic style, of a small gift of his own to the wife of his physician :—

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[*] The reader will find all these translations in Addison's paper, No. 229 of the *Spectator*. Mr. Wharton's volume contains others besides.

[†] "Quum flueret lutulentus erat quod tollere velles."

[*] We have taken the liberty of slightly altering Mr. Wharton's rendering, which in this and a few other cases fails to reproduce the repetition (thrice over of *ἄκρος* in this piece), which is so marked a peculiarity of Sappho's style.

[†] In the Essay on the Poems of D. G. Rossetti, *Essays and Studies*, p. 92.

κεῖνο γάρ τις ἐρεῖ τῳ, ποτίδων σ', ἦ μεγάλα χάρις
δώρῳ ξὺν ὀλίγῳ· πάντα δὲ τιμᾶντα τὰ πὰρ φίλων.

T. Holmes.

Article 4352.

The Medico-Legal Journal. Published under the auspices of the Medico-Legal Society of New York, 128 Broadway, New York. Vol. ii. No. 4. March 1885.

The *Medico-Legal Journal* is the only periodical in the English language dealing especially with those subjects on which the lawyer and the medical man meet. It is to the ability and energy of the editor, Mr. Clark Bell, that the success of the society and the interest of the journal are mainly due. He is assisted by a staff of associated editors, eleven of whom are legal and eleven medical persons. The information furnished by the journal is gathered from a wide field. Books and periodicals are collected from all countries in Europe and America. Mr. Clark Bell and his assistants are excellent linguists, but with twenty-three editors there should not be so many misprints.

In the number under review the first article is entitled 'Organic Diseases of the Brain not a Constant Factor in Insanity,' by Dr. S. T. Clark. This is a thesis which we have no intention of disputing. The following sentence is, at least, striking from the variety of important propositions which it contains. 'The prime cause of functional disturbances, as well as organic disease of the moral and intellectual faculties, is found in hereditary predisposition ; for we have not only read of well-authenticated cases where all these powers existed unimpaired when the two hemispheres of the brain had become two puddles of pus, but we have also seen a medical gentleman whose judgment, affections, and perceptions were unaltered, although he was able to map out on his own skull the amount of softening we found when we conducted the autopsy a few weeks later ; yet we believe the peculiar nature of the blood-supply to the brain predisposes that organ to much sympathetic disturbance.' Most of us in the old country would like to hear more of the person who preserved all his faculties on pus instead of brains, and would have been obliged to Dr. Clark for indicating the amount of softening with the same preciseness as the medical gentleman himself seems to have done when alive.

Dr. Clark mentions a case of exophthalmic goître as an example of a disease causing insanity without any organic lesion of the brain. He quotes the observation of Eulenburg that 'venous congestion and retrobulbar growth of fat certainly play the chief part in Basedow's disease.' But this does not explain why it should bring insanity after it. Recent observations and experiments have rendered it probable that the thyroid gland sends into the blood some material which serves especially for the nutrition of the brain. This explains why disease of the gland may cause derangement of the mental faculties, and why its absence or extirpation may entail idiocy or dementia.

The following unpleasant revelation agrees with what was written about fifteen years ago by the late Dr. Edward Seguin, who also took his experience from New York. 'As surely as crime and habitual drunkenness tend to insufficiency of stability of brain-tissue, so surely does the dread of maternity unsettle the moral functions of unborn progeny. A woman who passes for an accomplished and attractive society lady, who has married without the noble object of making herself the centre about which all the delights of home revolve, but the better to be admired and the more to have her own vainglory enhanced, finds herself pregnant. This is a hindrance to her plans for future conquests, and she begins to swallow all the nostrums known to herself and the sisterhood ; and, escaping the death-stab of some professional abortionist, and failing after repeated trials with goose-quill and bodkin, she gives birth to an unwelcome child who has been made an abnormal crank, a moral monster, a murderer or suicide *in utero*.'

The next article, on 'Contusions, Ecchymoses, Cutaneous Hypostases, and their Relation to Legal Medicine,' by Dr. J. B. Lewis, is a well-written and useful paper. We have also the very able address of Clark Bell, on retiring from the presidency of the Medico-Legal Society, and a summary of the inaugural address of his successor, Dr. R. O. Doremus.

The *Medico-Legal Journal* devotes a great portion of its space to the advocacy of reform in the custody and care of the insane in the United States. One Bill to amend the law has just passed through the State Legislature of Pennsylvania. Another is pending for Michigan ; and a committee appointed by the New York Legislature to inquire into the affairs and management of Utica State Asylum has, amongst other things, reported that it is the 'unanimous belief of the committee that attendants do from time to time treat the patients with reckless and wanton roughness, and at times with a cruelty that is simply outrageous, considering the helpless mental condition of the patients.'

In an editorial notice of Dr. Bucknill's 'trenchant paper in the February number of the *Nineteenth Century* magazine against the whole system of private madhouses,' the readers of the *Medico-Legal Journal* are informed that 'Dr. Bucknill brings to the support of his views the evidence of Mr. Gaskell and Mr. Campbell, Royal Commissioners on the Scotch Lunacy Board ; Messrs. Wilkes and Luteridge, of the Irish Board ; of Mr. John Forster, of the English Board. He meets the argument that the private asylums supply a public need by flat denials, and quotes King Lear.' We do not mean to make anything more of this oversight in distributing English commissioners over Scotland and Ireland, save to say that, by a merciful ordination, it is rare that the English and Scotch are beset by the same chimera at once. As far as we know, there is 'no trend of popular distrust' against private asylums in Scotland, and the editor assures us that there is none in America. 'So far as we know,' he writes, 'there has been little public complaint of our private asylums. In New York they are under the same species of visitation as the public institutions, which is scarcely worthy to be called a visitation as insisted upon in England. Our first duty is to the proper regulation of the public institutions. It will be time to give attention here to the private asylums when we settle on some sound system for the public. In Great Britain the case is different. They have

Boards of Lunacy Commissioners there with full powers—a thorough system of visitation and reforms adopted, proved, and acquiesced in, which it may take us five years to inaugurate. It will be time for us in the American States to repair the waste at the spigot when we have stopped the escape at the bung. When the blood is rushing from the arteries, we do not stop to tie up a cut in the finger.'

It thus appears that the American writer thinks that the abuses in public asylums in the United States are very much greater than those in private asylums. The saving points in public asylums in Great Britain are assumed to be the existence of a board of managers or directors, who are supposed to be competent to keep the superintendent to his duty, and the fact that the superintendent being their servant, generally on a three months' tenure, and receiving a salary from them, has not the same temptation to receive sane persons as lunatics, or to starve or pinch them in food or comforts. Complaints of wrongous detention and ill-usage are much commoner in America than in Great Britain, and are often made against the superintendents of State asylums. This might cause those who object to a private asylum from *à priori* reasons to reflect a little. The truth is, that managers are perfectly useless as a safeguard against the wrongous detention of lunatics, and if they interfered in such matters would do a vast deal of harm. Moreover, they are often surprisingly eager to get the superintendent to have a good balance from paying patients. One of the great evils in asylum management in these islands is the existence in many institutions of a class of directors jealous of their power, but incapable of intelligently exercising it. We know of cases where much harm to the sanitary condition of asylums, and to their proper government and discipline, has been done by such men. They often hinder the superintendent from doing many good things he purposed, and, by contracting for provisions at absurdly low rates, and spending money in wrong directions, do much to harm the patients. An asylum under a single head, if he be at all a capable and sensible man, is sure to be better managed than when the establishment is under a committee who 'take an interest' in the management. The difficulty is that, as these committees vary in degree and kind, it is difficult to get people to rise against a grievance which presses unequally at different points. Can nothing be done to prevent grossly incapable and failed old men from becoming managers of asylums? W. W. Ireland, M.D.

Article 4353.

Transactions of the American Surgical Association. Vol. II. Philadelphia: 1885.

American scientific surgery has lost its chief in Dr. Samuel Gross, the founder of the Association and its first president in 1880; and the work he ably inaugurated has been well continued, as is proved by these *Transactions*. They contain twenty-six papers on surgical subjects, and some of them very original and valuable; and. besides the papers themselves, are the reports of discussions following the reading of the papers. These additions are sometimes very useful, and place on record facts and opinions which would probably not otherwise see the light. The language is often strange, but the vigour and originality of the observations is refreshing, and never wanting in clearness. American surgery is essentially practical, and both papers and remarks show this; but they also show thoughtfulness and careful research, and an acknowledgment of the authority and observations of English and Continental writers.

Two papers are contributed by the late Dr. Gross, one on wounds of the intestine, and the other on operation for the relief of stricture of the œsophagus. In the former, he gives the result of a number of experiments made upon the lower animals with the view of determining the process of repair, and also of learning the best treatment for such wounds. These experiments appear to have been made in 1841-43, and, though published about the time, have been lost sight of from various causes. The mode of repair is not given differently from what we are accustomed to accept, and, in regard to treatment, he only forestalls our present plans in some respects. He insists upon the necessity of suturing even the smallest wound of the intestine, and prefers the ordinary interrupted suture of sewing silk. He lays stress upon the appearance of blood with the motions as an important diagnostic symptom, and leads the reader to assume that this is a common occurrence; but is this really the case?

Dr. Gross's other contribution is a careful and critical survey of the different operations for the relief of stricture of the œsophagus, including the 'retrograde divulsion' of Professor Loreta. He gives the preference to gastrostomy for the relief of carcinomatous stricture, and the same for cicatricial stricture, only contending that our experience of 'retrograde divulsion' is not yet large enough to come to a trustworthy conclusion about it.

There are many papers of interest in the volume, and among those are five involving the use of the trephine. Some of the authors discuss its application in cerebral abscess, and give cases in which it has been used successfully when injury to the skull pointed to the cause being probably connected with depressed or injured bone. The symptoms of abscess of the brain are certainly very obscure, and the fact of injury having occurred to the skull will lead the surgeon to use the trephine more boldly for the relief of doubtful symptoms; and, in more than one of the cases narrated, the release of the pus did not immediately follow the puncture of the exposed dura mater. Trephining for traumatic epilepsy forms the subject of a paper by Dr. Briggs, the president of the Association; and the experience of the Civil War in America affords some curious cases of this class, which are mentioned here. Insanity following depressed fracture forms an interesting subject, in which trephining has played an important part; and Dr. Byrd makes this the subject of a paper also.

The suprapubic operation of cystotomy has attracted some attention lately, and we find here a contribution on the subject by Dr. Tremaine; but the case was one of stone in the bladder, and not tumour. Two successful cases are reported: one of a boy, aged 3½, with a very large stone; the other, a man aged 30, in whom the stone could not be grasped by a lithotrite. In the discussion on the paper, some of the speakers urged that suprapubic lithotomy was the only operation left when lithotrity could not be performed.

Dr. Senn gives a long and well-prepared paper on cicatrisation in blood-vessels after ligature, and concludes from a series of well-conducted experiments that all operations on blood-vessels should be conducted on antiseptic principles; and that catgut is the best agent for ligaturing, so as to secure provisional and definitive closure of the vessels—the double catgut ligature being preferred for large arteries or for varicose veins. A clot in the vessel never organises, and the permanent means of closure of the ligatured vessel is due to a connective tissue and epithelioid proliferation arising in about seven days in arteries and three or four in veins. Both Dr. Senn and Dr. Tiffany, who gives a paper on ligature of the common femoral, advocate the free opening of the sheath as safe, and at the same time allowing more freedom, and, in the case of the femoral permitting better judgment about the giving off of large branches.

Tracheotomy in croup is discussed by Dr. Gay, and is advocated as more likely to do good than any medical treatment, and as required to be done early. Some of the experiences of the speakers in the discussion are curious, but all seem to agree in the advisability of early operation. The silver double tube seems to be the only one referred to.

Dr. Moses Gunn contributes an useful practical paper on the philosophy of manipulation in the reduction of hip and shoulder dislocations; and this will be read with interest. He maintains that the untorn portion of the capsular ligament, by binding down the head of the dislocated bone, prevents its ready return over the edge of the cavity to its place in the socket. He argues next the principle that this return can be easily effected by putting the limb in such a position as will effectually approximate the two points of attachment of that portion of the ligament which remains untorn. But this principle was originally put forward by Dr. Gunn thirty years ago, and the practical deduction he then urged was that the limb should be placed in exactly that position it occupied at the moment of dislocation. The present paper is only an elucidation of these principles, which English surgeons have accepted and recognised as the practical outcome of scientific American surgery. The illustrations of the different forms of dislocation are good, and are valuable from their being taken from existing preparations.

A paper on trifacial neuralgia by Dr. Mears is well prepared; and there are others of surgical and pathological interest on the malignant degeneration of ulcers of the leg by Dr. Prewitt, and on neoplasms by Dr. Gregory, and a careful summary of operations for the entire removal of the tongue by Dr. Norris.

The American Surgical Association is to be congratulated on its success, and it is to be hoped it will steadily advance the science of surgery in a country where the field is exceptionally large.

W. W. WAGSTAFFE.

ARTICLE 4354.

The Lettsomian Lectures on Bronchial Asthma. By J. C. THOROWGOOD, M.D. Second Edition. London: Baillière, Tindal, & Cox, 1885.

IN the second edition of Dr. Thorowgood's well-known Lettsomian Lectures on Asthma, the author has added to their value by publishing another lecture on 'Remedies for Asthma,' and in enlarging on matters only briefly noticed in the first edition.

These lectures present a clear and comprehensive analysis of the views set forth by the numerous authors who have written on the pathology and treatment of asthma, while they contain the valuable results of Dr. Thorowgood's large experience in the treatment of this disease. With regard to the treatment of the asthmatic paroxysm, it is certain that the author of these lectures has not realised the pre-eminent value of hypodermic injections of morphine with atropine in subduing the most severe forms of the dyspnœic attack. Dr. W. E. Steavenson (himself a sufferer), Dujardin-Beaumetz, Riegel, and others, bear unqualified testimony to the superior efficacy of this expedient above all others.

J. BURNEY YEO, M.D.

ARTICLE 4355.

The Student's Guide to Medical Jurisprudence. By JOHN ABERCROMBIE, M.D.Cantab., M.R.C.P. J. & A. Churchill, 1885.

THIS is a compact little manual of 387 pages, written in an attractive form, compiled at the suggestion of the publishers from the works of Taylor, Tidy, Guy and Ferrier, and others. Very free use, indeed, has been made of these authorities; but the writer candidly acknowledges to whom he is indebted, and modestly disclaims any title to originality.

Dr. Abercrombie's work is a very creditable performance, well up to date, fairly complete as an outline of the subject treated of, and, on the whole, accurate. Recent cases are embodied, and among those the supposed Stoke Newington murder and the Uxbridge shooting case. The section on rape is too short and incomplete, considering the importance of the subject; much shorter, indeed, than that on legitimacy. The advice given to the practitioner under the head of Life-Insurance strikes us as being very apposite. THOS. STEVENSON, M.D.

ARTICLE 4356.

An Introduction to Practical Organic Analysis, adapted to the Requirements of the First M.B. Examination. By GEORGE E. R. ELLIS. Longmans, 1885.

THE probable intention of this little volume is laudable, though somewhat obscure. The book is intended 'for the use of the medical student,' who is supposed to have 'passed his preliminary examination,' and hence to be 'familiar with the ordinary processes of inorganic analysis.' We may surmise that by the Preliminary and First M.B. Examinations are respectively meant the Preliminary Scientific Examination, and the Intermediate Examination in Medicine, of the University of London.

The volume is a very crude production. The author gratefully acknowledges how much he is indebted for much that is contained in his book to the teaching of Professor A. W. Williamson. It must not be supposed, however, that this illustrious chemist is responsible for the accuracy with which his teaching is depicted. Indeed, we feel sure that Professor Williamson would disclaim many of Mr. Ellis's statements. Thus, glycerine is said to be probably present when a liquid burns with a luminous flame on heating. 'An oxalate,' it is said, 'is not decomposed by dilute H_2SO_4.' The testing for cane-sugar is thus described. To the blue solution obtained by adding sulphate of copper and potash to the liquid to be tested 'add HCl till the solution is acid, then boil for one or two minutes; the cane-sugar is converted into grape-sugar, which reduces the Cu solution with the formation of the red oxide of copper.' On p. 67 we read of 'a coloration which is precipitated on adding' acetic acid! 'Sugar of blue' is another curious expression. We also read '$H_2\overline{T}$ reduces

Ag while still in the wet tube, and thus differs from other bodies which also reduce Ag salts'—a veritable puzzle. In the directions given for the detection of simple poisons in the presence of organic matter, it is stated that, if the liquid be strongly acid, there is probably present a large quantity of hydrochloric, sulphuric, or nitric acid; the probable presence of oxalic acid being overlooked.

Notwithstanding its many inaccuracies, and its obscurities of diction, this book may in subsequent editions prove useful and acceptable. It needs, however, careful revision, simplification, and the elision of the absurd formulæ which are supposed to represent the composition of the reagents used. Chemists do not ordinarily use '$FeSO_4$' nor '$CuSO_4$' in testing, and no space is saved by the indiscriminate use of the formula C_2H_6O to represent commercial alcohol.

THOS. STEVENSON, M.D.

ARTICLE 4357.

The Young Doctor's Future; or, What shall be my Practice? Being some account of Medical Appointments: Civil, Naval, and Military; with Hints upon the Method of General Practice. By E. DIVER, M.D. London: Smith, Elder, & Co. 1885.

THE first edition of this work, the scope of which is well indicated in the title, was issued in 1881. The appearance of a recent edition shows that the information it contains is prized. It appeals to the newly qualified student who is trying to make up his mind as to the department of practice to which his energies are first to be directed. If he be thinking of a ship-surgeoncy, he will find full particulars of the various lines of steamers, and the advantages and disadvantages of each service, as well as of the emigration services, though the last are at the present time almost closed to new applicants. An outline of the regulations guarding the entrance to the Army, Navy, and Indian services is given, as well as tabulated statements of the rates of pay and chances of promotion. A little fuller information on the last head, and a comparison of the relative advantages of the Army and the Indian Medical services, would add to the practical value of the book. The second section contains a very sensible practical discussion of the difficulties, dangers, and advantages of general practice; the hints as to the special drawbacks and difficulties of poor-law appointments, and the best way to avoid or mitigate them, will be especially useful to the inexperienced practitioner.

ARTICLE 4358.

Extension in the Treatment of Diseased Vertebræ. By BUCKMINSTER BROWN, M.D. Pamphlet reprinted from *Boston Med. and Surg. Jour.*, of July 3, 1884.

DR. BROWN advocates extension by weight and pulley in cases of caries of the spine, and records several cases treated successfully. A padded leather belt is attached to the pelvis, with straps on each side extending to the foot of the bed, from which part the cord with weights is fixed for counter extension; the foot of the bed is raised, or a belt is attached below the arms, or to the head, and drawn upwards by weights over pulleys. In some cases he places a pillow below the angular projection.

E. NOBLE SMITH.

ARTICLE 4359.

The Influence of Constant Use of High-heeled French Shoes upon the Female Form. By S. C. BUSEY, M.D., Washington D.C. Reprinted from the *Gynæcological Transactions.*

DR. BUSEY has here pointed out very lucidly the various evil influences of the constant use of high-heeled boots. 'Sore, contracted, and crippled feet, strained and stiffened joints, altered and displaced articulating surfaces, restrained mobility, and alteration of the line of gravitation' are the most obvious immediate results, leading to ungainliness of carriage and difficulty of locomotion. It is, however, the effect upon the pelvic organs to which Dr. Busey chiefly calls attention—the inclined position imposed upon the pelvis by the raising of the heels. He explains how the bladder, uterus, and rectum, from constant obliquity of the pelvis in the upright posture of the body, are harmfully influenced by the malposition; but not only are these organs affected, but 'all the tissues and organs, the vagina, ovaries, Fallopian tubes, ligaments, and fasciæ may become involved. Hyperæmic conditions, distortions, and displacements, either singly or collectively, may follow in an extended sequence of local and general disorders; but menstrual disturbances and vaginal discharges are probably even more frequent results.'

E. NOBLE SMITH.

ARTICLE 4360.

Pocket Memoranda relating to Infectious Zymotic Diseases. Arranged by MATTHEW ALGERNON ADAMS, F.R.C.S. London: J. & A. Churchill.

THERE are probably very few men, not crammed for an examination, who could say off-hand what are the minimum and maximum periods of incubation of the acute specific diseases. Everybody of course knows about how many days incubation generally lasts, but if by chance any should have an infirmity of memory with regard to these elementary facts, the card prepared by Mr. Adams will be found to give him not only the normal, but the maxima and minima. The normal duration of the periods of latency, invasion, of specific lesion, and of infectiveness are also indicated on a coloured chart. The only criticism we have to offer is that two days is rather a long time to allow, after the first symptoms are noted, before expecting the rash of varicella to come out, or the characteristic membrane of diphtheria to appear. The usefulness of the card is increased by a list of precautions to be taken, and by a series of hints to serve as the heads of an inquiry as to the source of contagion.

NOTES ON BOOKS.

ARTICLE 4361.

The Asclepiad. Vol. II., No. 6. By BENJAMIN WARD RICHARDSON, M.D., F.R.S. Longmans, Green, & Co. April 1885.

IN an article entitled 'Measures of Vital Tenacity,' Dr. Richardson has touched on a very curious and interesting phenomenon at present insusceptible of explanation. In the fact that cats have a greater vital tenacity than dogs, and goats than sheep, there may be a hint, inasmuch as it is the more domesticated animal that dies first; age and degeneration of tissues are, of course, factors, but beyond these Dr.

Richardson seems inclined to lay greatest stress on will. The evidence seems to us to point to breed being the most important factor. In his oration at the Medical Society, Professor Humphry was able to bring forward additional evidence that old age runs in families; so also members of the same family may not infrequently be noticed to die in succession at or about the same age, not always of the same disease, but of some acute disorder to which they appear to be able to offer no resistance, although up to that time enjoying excellent health; such cases sometimes upset the most careful prognosis. An article on Vesalius is illustrated by an autotype copy of De Calcar's portrait, and by a number of woodcuts from the treatise *De Humani Corporis Fabricâ.* It is curious that Dr. Richardson does not remark that Fig. 8 represents what would be at the present day considered an abnormal arrangement; the arch of the aorta lies very low, the left carotid is a branch of the innominate, and the trachea is very long and contains an unusual number of rings. The article is a just and appreciative study of a remarkable man. It would be a matter of regret if 'the minute clinical investigator and teacher, equally at home at the bedside, in the *post mortem* room, at the lecture-table, at the desk' (p. 188) were 'now passing out of history.' But Dr. Richardson is wrong; many such flourish at this day, and it would not be difficult to name many of the younger men who are making ready to fill any gap in the ranks. Oxalic ether is recommended as a local application for the removal of morbid vascular growths; it produces almost painlessly a free dry eschar.

NEW INVENTIONS.

Article 4362.

D'ARSONVAL'S ELECTRODES.

M. D'Arsonval, of the Collège de France, recently described several electrodes which cannot be polarised, and will render incalculable service in making electro-physiological researches, especially as they replace all electrodes used for clinical purposes which are polarisable. All electrodes that cannot be polarised are constructed according to Regnauld's principle, and are excessively inconvenient, and only fitted for laboratory use. Raymond's and Dubois's electrodes cannot be easily moved from place to place. They consist of a glass receptacle, containing a solution of zinc sulphate, in which is immersed a zinc plate, partially covered with kaolin, and impregnated with a solution of sodium chloride. The electrodes made according to M. D'Arsonval's directions, consist of a silver capsule containing melted silver chloride covered with chamois leather. In these electrodes, silver chloride plays the part of zinc sulphate, but, as it is insoluble in water, it can be brought into contact with the tissues. Silver chloride can be replaced by dioxide of manganese and charcoal, or lead plates peroxydised (the positive plates of accumulators). When living tissues are under observation, steel needles are used instead of ordinary needles, and they are by the following method coated with silver chloride. They are plunged into a strong solution of silver nitrate; when this is dried, into one of sodium chloride; thus a layer of silver chloride is formed, which adheres to the needles on being melted, after it has dried. M. D'Arsonval, in his communication, mentions a fact which alone shows the utility of his electrodes. Electrotonus is manifested in nerves stimulated by these electrodes the same as with other electrodes, which proves that it is not produced by a secondary polarisation resulting from the electrolytic effects of a current. Since Matteucci's experiments, physiologists have tried to prove that electrotonus is an effect of electrolysis.

Article 4363.

MALASSEZ'S IMPROVED CAMERA LUCIDA FOR MICROSCOPIC DRAWING.

A camera lucida for microscopic drawing must fulfil many conditions. There is an especially important one with reference to the angle, formed by the ray proceeding from the preparation, and by another from the paper used for drawing. This angle is 90° in Wollaston's and Amici's camera lucida, from 15° to 18° in Nachet's, Milne-Edwards', &c. When the angle is at 90°, either the microscope or the paper must be placed in a position which renders working at ease impossible; there is also another disadvantage. In order to prevent the drawing from being considerably magnified, a complicated optical instrument must be used. Those of an angle of 15° or 18° magnify the drawing in one particular sense: a square is changed into a trapeze, a circle into an oval. M. Malassez proposes different methods for remedying these faulty conditions. He advises that the camera lucida in which the reflection falls on a transparent glass should be abandoned, as many luminous rays are lost; also frequently the object reflected is double. Those in which the image is reflected on a metallic mirror M. Malassez condemns also; the reflection is too quickly dimmed. He recommends the exclusive use of camera lucida made with prisms, and prefers those of Doyère and Milne-Edwards, in which the large prism is movable, and a maximum angle of 45° can be reached. The microscope is bent backwards to an angle of 45°. The image reflected on to the paper placed behind the microscope preserves its accurate proportions. The position in which the paper and the microscope is placed prevent the worker from being fatigued, and is the one adopted when there are a great many preparations to examine. In those exceptional cases, when the objects to be drawn float in fluid, and consequently shift about when the microscope is on an incline, the angle of the camera lucida should be made more acute, and reduced to an angle of 15° or 18° (the smallest angle with which reflection can be obtained), the drawing paper should be placed by the side of the microscope, at the same angle as that of the camera lucida; the images by these means are not distorted.

Article 4364.

ROY'S MICROTOME, MODIFIED BY MALASSEZ.

Roy's microtome has been modified by M. Malassez, the well-known inventor of the *compte-globule.* It can be easily used, and is adapted to general laboratory use. The substance to be cut is fixed to one end of the rectangular copper slab perpendicularly placed on a small horizontal board. The razor is fixed on a movable piece of copper attached by a vice at the opposite extremity of the copper slab. This is moved downwards as required; the movement is regulated by a lever acting on a dentated wheel. M. Malassez has made the downward movement automatic. This is effected by drawing back the razor after a section has been made. A spring brings back the lever into position. The length is just sufficient to forward the dentated wheel one tooth. Sections of one-hundredth of a millimètre are thus obtained, or two-hundredths of a millimètre, according to the length of the thread. Unlike the original microtome, the copper slab which supports the mechanism holding the substance to be cut is movable. This alteration, which enables sections to be made in alcohol, is a great advantage with soft tissues, which are easily torn. M. Malassez substitutes methylene chloride for ether, which is generally used for congelation. The former body produces a lower degree of cold; it evaporates at ordinary temperature, except under pressure—therefore a spray is unnecessary. When the tap of the receptacle is opened, and the methylene chloride directed on to the slab on which is the substance for cutting, this latter is immediately frozen, and a number of sections extending over a considerable area can be made with ease. M. Malassez has also modified the manner of fixing the razor, which renders the angle of inclination more suitable for making sections. These combined improvements of Roy's microtome render it an excellent instrument. The sections made with it are not so fine as those obtained by sliding microtomes; but, as sections of one-hundredth of a millimètre are generally thin enough, and the excessive care required in using the sliding microtomes is not necessary with Roy's, it is therefore preferable.

Article 4365.

IMPERMEABLE FLOORS.

Medical men have long been preaching, and are now beginning to practise, the employment on sanitary grounds of flooring laid without interstices to catch the dirt, and with polished, or at least smooth, cleanly, and washable surfaces. Costliness has been hitherto a drawback to the adoption of such flooring. The solid one-inch parquet floors of Bucher & Durrer (agents, Schaibler, Bros., & Co., 23 New Broad Street, E.C.) supply the needed element of relative cheapness. Messrs. Bucher & Durrer, owning large Hungarian forests, are able to supply well-seasoned woods direct from their own saw-mills, at prices much below those which have hitherto been current. Their floors are durable and solid, and have the advantage of being highly artistic. They will, it may be expected, and desired on hygienic as well as artistic grounds, come into extensive use for public institutions as well as private houses.

MISCELLANY.

Dental Hygiene.—M. Galippe, in a discussion at the Société de Médecine Publique de Paris, on dental hygiene in schools, insisted on the fact that overtaxing the brain by over-study in schools affected dental growth. Among those students who work hard, the teeth become deteriorated a few weeks after their entry; caries is frequent among the successful pupils; the second dentition is frequently premature, and the teeth that appear are diseased. Among students who are really overworked it frequently happens that the teeth begin to decay when hard work reaches its maximum, at the time of examination, or those that are faulty grow worse, become very painful, and have to be extracted.

The Late Mr. Peter Squire.—On the 20th ult. the ceremony of unveiling a portrait medallion of the late Mr. Peter Squire in the Pharmaceutical Society's house in Bloomsbury Square was performed by Sir Spencer Wells, Bart., in the presence of a large gathering. The company included Sir Oscar Clayton, Dr. Morell Mackenzie, Mrs. Rose Mary Crawshay, Dr. Protheroe Smith, Dr. J. W. Ogle, Dr. Hare, and the Rev. W. Barker. The President of the Society (Mr. Carteighe), in opening the proceedings, read letters from Sir Henry Acland (President of the General Medical Council), Sir A. Clark, Bart., Sir Edwin Saunders, Dr. Quain, F.R.S., Dr. Charles West, Dr. Buchanan, F.R.S., Mr. White Cooper, and others, regretting their inability to be present, and expressing sympathy with the object of the meeting. Sir Spencer Wells, unveiling the medallion, spoke of the feeling which a very great many members of the medical profession had for Mr. Squire, and how much they felt the association of the work of the pharmaceutical chemist with their own. He then referred to the ability, energy, and industry with which Mr. Squire worked in arranging our present Pharmacopœia, and in bringing together the Scotch, Irish, and English Pharmacopœias so as to form one British work. He mentioned how Mr. Squire's success as a practical pharmacist had gained for him the appointment which he held for forty years of chemist to the Queen, and stated that when anæsthesia was first attempted in this country Mr. Squire constructed the apparatus by which the first operation was performed, which apparatus is now in the museum of University College. He also stated that Mr. Squire was three times President of the Pharmaceutical Society, and was its Examiner in Botany for twenty-seven years. He concluded by expressing his admiration for the ability and industry which Mr. Squire evinced throughout his long life. Dr. Garrod, F.R.S., Mr. Haynes Walton, Dr. Theodore Williams, and Professor Bentley having also spoken, the proceedings terminated.

The Index Medicus.—We are pleased to announce that this valuable serial will be continued under the auspices of Mr. G. S. Davis, of Detroit, Michigan. The thanks of the medical profession are due to Mr. Davis for coming forward and taking up a periodical which up to the present time has not been commercially remunerative, and we hope that those of Great Britain and the Continent will come forward with subscriptions, and so help Mr. Davis in his efforts to make the periodical self-supporting. It is needless to say that were the editors remunerated for their labours it would be utterly impossible to publish it. The *Index Medicus*, now in its seventh year, records the titles of all new publications in medicine, surgery, and the collateral branches received during the preceding month. These are classed under subject-headings, and are followed by the titles of valuable original articles upon the same subject, found, during the like period, in medical journals and transactions of medical societies. At the close of each yearly volume a double index of authors and subjects is added, forming a complete bibliography of medicine for the preceding year. All medical men who approve of the object for which the *Index* is issued, may serve it by doing two things; viz., first, subscribing promptly for the *Index*; and, second, taking care that a copy of every book, pamphlet, &c., of which they are the authors, is forwarded to the editors. It is also hoped that all publishers of medical works, large or small, will see that it is to their interest that each of their publications is promptly sent to the editors in order to secure an early and accurate priced record in the *Index*. These may be forwarded to Trübner & Co., 57 and 59 Ludgate Hill, London.

☞ IMPORTANT NOTICE.

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HARTMANN'S HYGIENIC WOOD WOOL DIAPERS

Owing to the increasing demand for Hartmann's Hygienic Wood Wool Diapers we were induced to enlarge our machines, and are therefore enabled to offer Hartmann's Hygienic Wood Wool Diapers in Packages at

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(hitherto sold the half-dozen at 2s.). This enormous reduction in price brings Hartmann's Hygienic Wood Wool Diapers now within the reach of everyone, as they are thus by far cheaper than the usual expenditure in washing alone, not mentioning their many advantages so conducive to health and comfort.

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If once adopted they will be found to be the cheapest and most appropriate Diapers ever produced.

UNEQUALLED and UNRIVALLED for GENERAL USE and ACCOUCHEMENT.

In the construction of these Diapers we have acted upon the suggestions of an **EMINENT LONDON OBSTETRIC PHYSICIAN**, who after repeated trials of them among his patients, now pronounces **HARTMANN'S HYGIENIC WOOD WOOL DIAPERS** perfect in material and form, and **THE MOST ABSORBENT, COMFORTABLE,** and **HEALTHFUL** (because Antiseptic) **APPLIANCE EVER PROVIDED** for this special purpose.

The essential requirements in Diapers are the rapid and thorough absorption of all secretions, and the prevention of odours resulting from decomposition. **NOTHING HITHERTO PRODUCED** answers these requirements so perfectly as **HARTMANN'S HYGIENIC WOOD WOOL DIAPERS, ONE OF WHICH IS EQUAL TO TWO OR THREE OF THE COMMON ABSORBENT COTTON WOOL PADS, AND THEREFORE THE CHEAPEST AND BEST ARTICLE OF ITS KIND IN THE MARKET. Indispensable to Ladies travelling.** To be burned after use.

ST. CLAIR THOMSON, Esq., M.B.Lond., Resident Medical Officer to Queen Charlotte's Hospital, writes to the *British Medical Journal* of Nov. 1, 1884, on pages 868 and 869:—

'**AN ABSORBENT AND ANTISEPTIC DIAPER.**—The use of napkins as diapers after delivery has been discontinued in this hospital for some time. This was chiefly as a safeguard against septic contagion; the use of the napkin for a second time, however well the washing might be done, being attended with some risk. The napkins were deficient in absorbing powers, and of course had no antiseptic qualities.

'For some years now the diapers have been made of pads, of a mixture of cotton-wool and tenax (carbolised tow). They were destroyed after use, thus avoiding the risk of contagion; **but they were very little more absorbent than ordinary linen, and were but slightly antiseptic.** The tenax could not be used in large quantity, as it caused cutaneous irritation.

'Latterly, **Wood Wool has been introduced here with the best results.** It is enclosed in oblong bags of corrosive sublimate gauze. These are about seven inches long by three inches broad, and about half an inch in thickness. They are tacked on to strips of waste linen (about a yard and a half in length), by which they can be attached to the binder, and kept accurately in position.

'Thus made they are very light, weighing less than half an ounce each; they are soft, flexible, cool, can be closely applied, and **cause no irritation.** *They have a great capacity for rapid absorption.* A pad which weighed three drachms before use, when saturated with lochia cruenta, weighed two ounces and four drachms—that is, it took up and retained more than two ounces of blood. The pads do not become "soppy" unless left for some time after saturation; neither do they cake or become dry.

'The natural antiseptic properties of the **Wood Wool** are increased by the presence of corrosive sublimate, in the strength of half per cent. Wood Wool with a larger percentage of sublimate has not been tried, it being doubtful if the sensitive vulva would bear it; and as the diaper is changed night and morning, whether saturated or not, it is hardly required.

'These are more economical than linen diapers, for there is not the price of linen to begin with, the expense of washing is saved, and a less number of draw sheets are required. They are now in regular use here.'

Samples and Pamphlets of Hartmann's Hygienic Wood Wool Diapers and Patent Wood Wool are, on request supplied to the Medical Profession gratis and post free, or a package of One Dozen Diapers at 2s. post free for P. O. or stamps.

For protection against useless and injurious imitations, the label of each package and every single diaper bears the name and trade mark of the Patentee and Manufacturer of Wood Wool—**PAUL HARTMANN, Heidenheim**—whose patent rights are rigidly protected.

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WHO SUPPLY THE WHOLESALE TRADE ONLY.

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Progress of the Medical Sciences and of Subjects relating to Public Health

EDITED BY ERNEST HART

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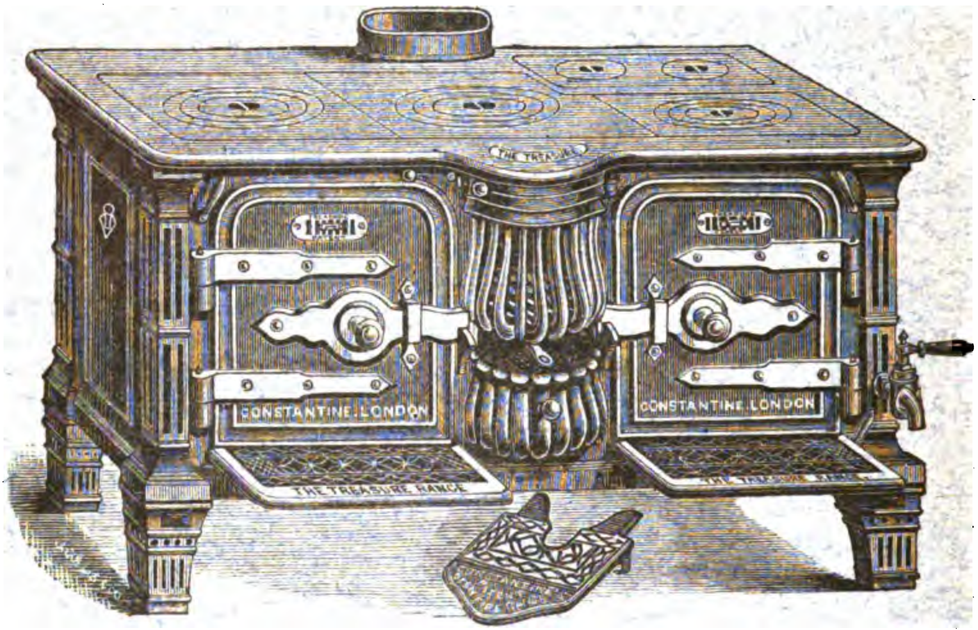

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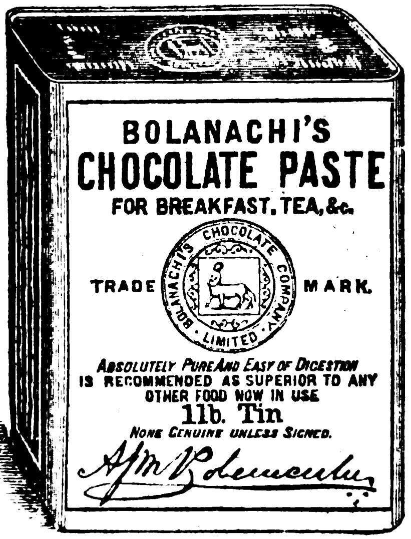
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The London Medical Record.

ARTICLE 4366.

RENSHAW ON DIPHTHERIA.

IN the *Practitioner*, Jan. 1885, p. 13, Dr. Renshaw contributes an able article on diphtheria, based upon personal experience. The definition of the disease is thus given :—'A specific contagious disease with membranous exudation on a mucous surface, generally of the mouth, fauces, or air-passages, or occasionally on a wound.' The incubation stage varies from fifty hours in the most severe cases, to fourteen days in the slightest; as a rule, the longer the disease is in showing itself, after the probable time of infection, the less serious is the attack of diphtheria.

The attack is ushered in by a shivering fit, slight in mild cases, severe in the most dangerous ones; then a rise of temperature, and in a few hours a sore throat; about thirty hours from the shiver, membrane will be found on the tonsil or uvula, spreading to the back of the pharynx, over the roof of the mouth, and on the mucous membrane lining the cheeks. On the second day from the exudation of membrane, albumen may be detected in the urine, making a great distinction between this disease and scarlet fever, in which it is rarely found till the stage of convalescence. In the majority of cases there is enlargement of the glands at the angle of the jaw, which show early or late, according to the severity of the attack. In some cases there is a discharge from the nose, which is always a bad sign, and accompanied by great prostration. Many days pass over before the patient is free from the danger of paralysis. In the author's experience the paralysis generally attacked the muscles of deglutition first, then those of the eyes, then passed slowly downwards until in many cases every muscle is paralysed in turn. Recovery, however, takes place in nearly every case.

Dr. Renshaw has made several experiments with diphtheritic membrane on animals, with the result that he considers diphtheria highly contagious, but that there is a possible antidote in the early application of a strong solution of permanganate of potassium or hypochlorous acid. Several experiments were also made with the membrane of membranous croup, but no effect was produced on animals to which it was given; thereby clearly proving the difference between the two diseases. The author further states that diphtheria is not a sewer-disease *per se*, although it is, no doubt, carried by drains. The disease is epidemic and sporadic, and does not follow any particular line of drainage.

With regard to treatment, the author enters into the subject fully; he advises free stimulation in cases where the temperature is high, or where the pulse is low and irregular. The membrane should be freely painted with a saturated solution of permanganate of potassium, and a strong gargle of hypochlorous acid should be frequently used. The membrane should be removed as soon as possible. The article concludes with the following remarks. From experiments, it appears that diphtheria is different from membranous croup; it is different from scarlet fever; it is a disease of itself, of a highly dangerous character, and is conveyed by contagion, but may arise *de novo* from a mixture of animal and vegetable matter in decomposition under certain circumstances. There is little, if any, evidence to show that it is caused by sewage simply, or by animal or vegetable decomposition, by themselves.

RICHARD NEALE, M.D.

ARTICLE 4367.

SMITH ON LAPAROTOMY FOR INTESTINAL OBSTRUCTION.

MR. J. GREIG SMITH, in the *Brit. Med. Jour.*, June 1885, p. 1189, enters minutely into the details of this operation. Speaking of the difficulty experienced in tracing the sources of the constriction, the following plan is given as one well worthy of being followed. 'First carry the hand to the cæcum. If it be found distended, the obstructing cause will probably be somewhere in the large bowel below this; and the hand is carried up the ascending colon, across the transverse and down the descending colon, as far as the sigmoid flexure, seeking for the stricture all the way. If the cause be not here, we are then told to carry the hand from left to right under the distended coils, seek for the collapsed bowel, and follow it up until we meet with distension, when we shall probably find the cause.' This is very easy in theory, but practice is quite another thing. Mr. Greig Smith says that, although he has hitherto always observed these rules, yet he has found them to cause great waste of valuable time, and now adopts the following plan. 'The most distended portions of the bowels are usually nearest to the surface. Move these about gently, and fix upon any portion that appears to be more congested than another. Follow this part in the direction of increasing congestion down into the cavity, wherever it may lead. If now the cause be discovered, it may be at once treated; if not, I would then recommend a plan that has been almost universally condemned—that is, to permit the bowel to extrude. The wound is covered with some layers of fine cloth, or, better still, by a large flat sponge wrung out of warm carbolic or boracic lotion, and covered with gutta-percha tissue to prevent evaporation and cooling; and the most distended coils are coaxed out under this covering. Carefully watch the gut as it comes out. One end of the coil will be more distended than the other, and will come out less easily; and this end will probably be more injected. We follow the end to wherever it leads, and it will certainly lead us to our goal.'

Directions are then given as to the return of the bowels into the abdomen after division of any obstructing bands, and the difficulty as well as danger of effectually reducing them is dwelt upon. Kussmaul recommends in some cases the use of the stomach-pump to reduce the flatulent distension; but Mr. Greig Smith advises free incision into the bowel at its most distended portion, with subsequent careful suturing, and showed to his class a patient who had recovered under such circumstances after lying in an apparently hopeless condition.

In conclusion, the following rules are given for guidance when opening the abdomen for the relief of acute intestinal obstruction.

1. Make the incision in the middle line below the umbilicus.

2. Fix upon the most dilated or the most congested part of the bowel that lies near the surface, and follow it with the fingers as a guide to the seat of obstruction.

3. If this fail, insert the hand and carry it successively to the cæcum, to the umbilicus, and the promontory of the sacrum.

4. If this again fail, draw the intestine out of the wound—carefully covering it—until increase of distension or congestion, or both, in one of the coils gives an indication that the stricture lies near.

5. If there be a considerable distension of the intestines, evacuate their contents by incision and suture the wound. Never consider an operation for intestinal obstruction inside the abdomen finished, until the bowels are relieved from over-distension.

6. Be expeditious, for such cases suffer seriously from shock. The whole operation ought to be concluded in an hour. RICHARD NEALE, M.D.

ARTICLE 4368.

JOHNE ON CONGENITAL TUBERCULOSIS.

DR. JOHNE, veterinary professor at Dresden, in a communication to the *Wiener Med. Blätter*, No. 15, 1885, remarks that, though the occurrence of tuberculosis had often been observed, both in the human infant and the calf, so soon after birth as to lead to the conclusion that it was inherited from a parent known to be tuberculous, it had rarely been possible in the human subject to obtain a *post mortem* demonstration of the presence of the bacilli early enough, or, in either case, to otherwise exclude the possibility of extra-uterine infection by means of the milk.

Dr. Johne having requested a number of his friends to send him any fœtuses of tubercular cows that might come under their notice, received on Feb. 20 of this year from Mr. Misselwitz, a veterinary surgeon at Chemnitz, the lungs and liver of an unborn fœtal calf, in the eighth month of intra-uterine life, whose mother had been slaughtered on account of advanced pulmonary tuberculosis. In answer to his inquiries, Mr. Misselwitz assured Dr. Johne that the uterus and placenta were free from the least trace of tubercle, and that all the fœtal organs, with the exception of the lungs and liver, were quite healthy.

Dr. Johne found the lungs of normal size, colour, and consistence throughout, except that in the hinder side of the upper lobe of the right lung there was a yellowish-grey well-defined nodule, of the size of a pea, the overlying pulmonary pleura being somewhat clouded; and on section four more nodules, not larger than millet-seeds, were seen, cheesy, and partly calcified, embedded in a greyish firm and apparently homogeneous material.

The bronchial glands, larger than hazel-nuts, were mottled superficially, and filled with cheesy, partly calcified yellowish nodules, of the size of small peas.

The liver, otherwise normal, was studded throughout with countless miliary tubercles; the smaller grey, the larger cheesy within and partly calcified externally. The condition of the portal glands was the same as that of the bronchial glands, though more advanced. The naked eye appearances were unmistakable; but the microscopic examination and staining of the various preparations displayed in the most characteristic manner the typical structure of bovine tubercle, as well as the presence of the bacilli in the giant-cells, and most abundantly where the caseated parts were in contact with the outer layers of epithelium-cells. In no part were any spores detected.

Dr. Johne believes that this is the first unequivocal case of intra-uterine tuberculosis on record; even Dr. Croker's case, three weeks after birth, having been conceivably one of infection.

The more advanced state of the tubercular process in the liver and adjacent glands than in the lungs would naturally follow the entrance of the bacilli with the placental blood by the umbilical vessels. Dr. Johne supposes that they were transported from the maternal to the fœtal circulation through the walls of the placental vessels, by the penetration of the latter by the leucocytes in which they were contained. Soon set free by the breaking down of the leucocytes, they lodged themselves in the lymphatic structures around the portal vessels, setting up multiple tubercles, comparatively few being carried onwards to the lungs, and there only at a later period. E. F. WILLOUGHBY, M.B.

ARTICLE 4369.

BOTEY ON THE APPLICATION OF THE ELECTRIC LIGHT IN MICRO-BIOLOGICAL AND MICRO-PHOTOGRAPHIC WORK.

IN the *Gaceta Médica Catalana* of February 15, is an article on this subject by D. Ricardo Botey. His attention was first directed to this application of the incandescent light by a paper in *La Lumière Electrique* of Oct. 25, 1884, by Ch. Stein; and he has so far improved and simplified the arrangement that he finds two or three Bunsen couples and a Swan lamp of two or three volts ample for all purposes. Dispensing with reflection of any kind, he uses a lamp about 1¼ inch long and ⅞ inch in its widest transverse diameter, one side of which is silvered so as to form a convex mirror, having the luminous arc in its focus, and consequently reflecting the light in parallel rays. For ordinary work the lamp is fixed beneath the stage of the microscope, either in a frame specially constructed, or, by what answers just as well, a piece of twisted copper wire clasping the stem of the instrument, and with a loop at the other end in which the lamp may rest.

For the examination of opaque bodies, the lamp is attached by a hinged arm to the tube of the microscope, after the manner of a bull's eye.

If very intense illumination be desired, another cell and a lamp of five or six volts would be useful; but equal effects may be obtained with the smaller lamp by using one of Abbé's or Dujardin's condensers.

If a Grenet's or Trouvé's cell be preferred to one of Grove's, the solution is prepared by dissolving 500 grains of potassic bichromate in 2,000 of water, and adding, after gentle agitation, 600 of sulphuric acid.

The electric light, besides being of a purer white, is less hurtful optically and chemically to the eye than any other kind; but the special advantage of the arrangement devised by Botey is that, the lamp being attached to the movable portion of the microscope, the light once adjusted retains its position in regard to the object, at whatever inclination the instrument be put.

For micro-photography Botey finds this lamp especially well suited. He recommends the dry plates of gelatino-bromide of silver, which preserve their sensibility unimpaired for many months, with ferrous sulphate and potassium oxalate baths for developing and fixing the image.

The duration of exposure requires some judgment; if too short, the finer details are lost; if too long, lights and shades are confused. As a rule, for low powers (20 to 100 diameters) ten to fifteen seconds is sufficient; for higher, twenty seconds to five minutes may be necessary. But once the time required for a given power and luminous intensity has been found, no change is needed for further subsequent operations.

With the lamp we have described, and three, or at most four, elements and a small camera, which need not be expensive, it is perfectly easy to obtain excellent photographs of such objects as the *bacillus anthracis* or the *peronospora Ferrani*.

E. F. Willoughby, M.B.

Article 4370.

SHER ON THE STATISTICS OF DENTAL CARIES.

Dr. S. Sher (*Zübovratchebnyi Vestnik*, March 1885) has examined the teeth in 169 pupils of a school, aged from 8 to 17, and in 1,526 soldiers and recruits. In 169 children, 189 carious teeth (1·1 tooth per head) were found. The percentage of dental caries in boys proved to be considerably larger (131, with 55 per cent.) than in girls (38, with 36·8 per cent.); in Jews (68, with 57·3 per cent.) than in Christians (101, with 48·5 per cent.); in dark-haired (52, with 55·7 per cent.) than in fair (65, with 55·3 per cent.), or brown (52, with 42·3 per cent.); in tea-drinkers (135, with 51·1 per cent.) than in tea-abstainers (34, with 47 per cent.). The teeth most often affected in the children were the right inferior second molar (in 26), the left ditto (in 24), the left inferior third molar (in 23), the right ditto (in 21). Of 1,526 soldiers and recruits, dental caries was found in 495 (32·4 per cent.). Its percentage in soldiers (904, with 34·6 per cent.) was larger than in recruits (622, with 29 per cent.); in brown-haired (810, with 32·5 per cent.) than in dark (361, with 32·1 per cent.) or fair (355, with 30·9 per cent.). In 1,526 persons, 1,050 bad teeth were found (362 in recruits, 688 in soldiers). Of 1,050 bad teeth, 254 belonged to the upper jaw, and 796 to the lower; 523 to the right side, and 527 to the left. The teeth most often attacked by caries were the right inferior third molar (in 176), the left ditto (in 173), the left inferior fourth molar (in 154), and the right ditto (in 146).

[In the *Voenno-Sanitarnoie Delo*, Nos. 26 and 27, 1882, Dr. Voinitch, of Vilna, published the results of his examination of the teeth in 1,091 soldiers. Like Dr. Franzins (*see* the London Medical Record, Nov. 1882, p. 460), he agrees, in his main conclusions, with Professor N. V. Sklifosovsky (*see* the *Vratch*, Nos. 5 and 6, 1880). In an able article in the *Vratch*, No. 44, 1882, pp. 39-42, Dr. M. F. Rabinovitch, of Vyborg, summarises the outcome of his examination of 358 pupils of three local schools, and 754 soldiers. The percentages of dental caries among the pupils of two well-to-do schools, were 44·5 and 43·9, while a third, so-called 'popular' (that is, pauper) school gave only 17·4 per cent. for boys and 18·18 per cent. for girls. An explanation for this striking difference the author finds chiefly in the harmful influence produced on the teeth by sugar and sweets, which are largely consumed by children of well-to-do families. Of 754 soldiers, 242 (32·1 per cent.) suffered from dental caries; the average number of bad teeth in an individual case was 2·97, the left inferior third molar being the most often affected. Dr. Rabinovitch gives an interesting table showing the influence of various professions (of the men before their entering the military service) on the development of dental caries. The lowest percentage of the latter is found in agricultural labourers (14·93 per cent.); the highest, in sweetmeat-makers (100 per cent.), publicans and innkeepers (93 75 per cent.), shopkeepers and hawkers (68·51), cabdrivers (60), bakers (57·2), &c. The average number of bad teeth in an individual case stands in a strict harmony with the data just quoted; while in agricultural labourers it is equal only to 1·1, in sweetmeat-makers it is as high as 10·8.—*Rep.*]

V. Idelson, M.D.

Article 4371.

ANREP ON FISH-POISONING AND THE FISH-POISON.

The supposition that fish-poison is a ptomaine, and that fish-poisoning is ptomaine-poisoning, has been placed beyond any doubt by the just published important researches of Prof. V. K. Anrep, of Kharkov (*Vratch*, No. 14, 1885, p. 213).

During February and March 1885, there occurred in Kharkov several cases of poisoning by salted sturgeon, five of which ended fatally. The author succeeded in isolating ptomaines (after the methods of Stas and Otto, and of Brieger) *a.* from the sturgeon which had caused poisoning; *b.* from the gastro-intestinal contents taken from one of the fatal cases; *c.* from the liver, blood, brain, and spleen taken from the same fatal case; and *d.* from the urine of another deceased patient. All the ptomaines proved quite identical in regard to their physical and chemical properties, as well as in regard to their physiological action on animals.

This alkaloid, Anrep's fish-ptomaine, essentially differs from Brieger's fish-ptomaines (*see* the London Medical Record, Jan. 1885, p. 14). It is an amorphous solid body, of strongly pronounced alkaline properties, and of highly toxic power. It dissolves in water only with difficulty, but gives salts which are readily soluble. These salts may be brought to partial crystallisation (*in vacuo*). Under the influence of caustic alkalies, acids, and boiling, the fish-ptomaine undergoes decomposition and loses its toxic action. The characteristic peculiarities of the alkaloid are two: *a.* its stability (the ptomaine in substance as well as its ethereal solution did not suffer the slightest change in its chemical and physiological properties even after a month's keeping); and *b.* its slow action on red blood-salt, the reduction of the latter being effected only in three to six hours.

The author carried out a series of physiological experiments to elucidate the action of his ptomaine on animals. In dogs, a hypodermic injection of a quarter of a milligramme of hydrochloric salt rapidly produced sickness, vomiting, moderate dilatation of the pupils, then dryness of the mucous membranes, thirst, and general prostration; in about two hours there appeared retardation of the respiration, weakness and slight retardation of the cardiac action, and considerable failure of reflex action. The symptoms lasted for about ten hours, and then the animal pretty rapidly recovered. In rabbits, the identical injection produced considerable dilatation of the pupils, very considerable retardation and difficulty of respiration, progressive weariness of the cardiac action; an hour later, paresis of the hind limbs; and in two hours, death from simultaneous arrest of the heart and respiration. In frogs, an injection of a dose much smaller than a fourth of a milligramme (0·0038 grain) brought about paralysis, loss of reflexes, dilatation of the pupils, failure and retardation of the cardiac action and respiration, and, on the second or third day, death.

The symptoms of fish-poisoning in man presented a nearly complete likeness with those produced in animals by Anrep's fish-ptomaine. Within three to six, not later than twenty-four hours after the ingestion of poisonous fish, there appeared malaise, sickness, giddiness, then pain in the stomach, vomiting, paleness of the face, dryness of the mucous membranes of the mouth and tongue, thirst, failure of sight, ptosis, dilatation of the pupils, coldness of the limbs, laboured respiration, feeling of oppression in the chest (especially in the præcordial region), weak and small pulse, difficult swallowing, considerable prostration, slight decrease of the temperature of the body. In the further course of the fatal cases, the cardiac action markedly grew weaker and weaker, the respiration became more and more difficult, prostration and ptosis increased, the temperature fell lower: then appeared cyanosis, retention of urine and fæces, slight œdema of the face, indistinctness of speech, weakness of voice. On the second, sometimes on the third or fourth day, death ensued.

Analysing the list of the symptoms, Professor Anrep points out that the fish-poison paralyses the spinal cord and medulla oblongata; probably also the unstriated muscular tissue.

The morbid changes found by Professor Anrep in the Kharkov cases agree, in the main, with those described by Dr. Tchugin (*see* the LONDON MEDICAL RECORD, May 1884, p. 217). The integuments were strikingly pale, the mucous membranes and nails cyanotic; *rigor mortis* developed somewhat more rapidly, and remained longer, than usually. The cerebral meninges presented venous hyperæmia; the brain was congested and œdematous. The heart was almost empty, the right ventricle slightly dilated, the cardiac muscular substance flabby and tinted yellowish. All the abdominal parenchymatous organs (especially the kidneys) were highly congested; the liver was flabby, its acini being indistinct. Over the gastric mucous membrane, numerous punctiform ecchymoses were scattered. The intestinal mucous membrane looked pale. The solitary follicles and Peyer's patches were distinctly swollen and enlarged, sometimes opaque, sometimes semitranslucent and encircled by a red halo. The bladder contained turbid urine. The blood was invariably fluid, of dark red colour, but underwent oxydation readily and rapidly.

Discussing various possible ways in which the fish-poison may be originated, Professor Anrep seems to be inclined to think that his ptomaine is a product of a morbid process in fish, the disease being caused by a peculiar micro-organism. This hypothesis seemingly finds a support in the investigations carried out by Dr. Vysokovitch (*see* the LONDON MEDICAL RECORD, Dec. 1884, p. 541), who examined the gastro-intestinal contents from a fatal case of fish-poisoning, and found therein swarms of micro-organisms (which are recognised by Vysokovitch as identical with the septic vibrio of Pasteur).

V. IDELSON, M.D.

ARTICLE 4372.

HASLUND ON THE PATHOGENESIS OF GONORRHŒAL RHEUMATISM.

IN a paper, read by Dr. Haslund, of Copenhagen, before the last International Medical Congress (*Annales de Derm. et de Syph.*, No. 12, 1884), the author first notices the various theories hitherto held as to the causation of gonorrhœal rheumatism, and, after remarking that all of them, thanks to modern research, are now tending to become matters of history, goes on to say that since Neisser has discovered the pathogenic microbe of gonorrhœa and Bockhart has demonstrated by his experiments that the gonococcus is the specific cause of the disease, it seems only natural to examine the fluid effused in gonorrhœal rheumatism for the same organisms. Dr. Haslund accordingly has searched for them in four cases, but has not been successful. This is a matter of great regret to Dr. Haslund, because he is convinced that gonorrhœal rheumatism is the result of specific infection. In one case the fluid from the joint was examined forty-eight hours after the appearance of the effusion; in the other three cases, after three, eight, and eleven days respectively. Common articular rheumatism has nothing whatever to do with the gonorrhœal form. The author has punctured the knee-joint eleven times in gonorrhœal rheumatism. In three case the duration of the effusion could not be ascertained; in seven it had lasted two, three, eight, fourteen, sixteen, seventeen, and twenty-three days respectively. In all, the amount of fluid present was sufficient to distend the capsule of the joint. In ten cases the fluid presented the following characters: it was turbid, yellowish green, thick, tenacious, neutral or slightly alkaline, with whitish flakes floating in it, and it rapidly coagulated when exposed to the air. Under the microscope, numerous leucocytes of variable form and size were seen. In the eleventh case, the fluid was bloody. Dr. Haslund also mentions five cases under the care of his colleague, Dr. Studsgaard, treated by puncture or incision of the joint. In one of these cases the fluid was examined for gonococci without success. According to the experience of the author and Dr. Studgaard, the articular fluid in gonorrhœal rheumatism is purulent or puriform. On the other hand, in traumatic synovitis the fluid is bloody; whilst in ordinary rheumatism it is serous, yellowish, and perfectly limpid. These characters are sufficiently constant to be of use in the differential diagnosis of doubtful cases of joint-effusion. [An abstract of a paper by Dr. Kammerer, of Freiburg, in which he reports that he found 'gonococci' in the fluid removed from the knee-joint in a case of gonorrhœal arthritis, will be found in the LONDON MEDICAL RECORD for July 1884. This case and another by Petrone (also referred to in the above-named abstract) are quoted by Dr. Haslund as the only two of the kind in which 'gonococci' have hitherto been found.—*Rep.*]

In a discussion which followed the reading of Dr. Haslund's paper, M. Martineau asked why, if Dr. Haslund's views were correct, gonorrhœal rheumatism did not occur in women. During eight years' experience at the Lourcine Hospital, of Paris, M. Martineau had not seen a single case of this disease. M. Barthélemy agreed with Dr. Haslund. The infective nature of gonorrhœa, he thought, could no longer be disputed. Although most frequently it remained a local affection, it sometimes became a general disease. The anatomical disposition and the unequal and much more extensive surface of the mucous membrane of the male urethra rendered generalisation more easy and virulent absorption more common in men than in women; still, generalisation was more frequent in women than it had been said to be. M. Barthélemy had observed, in M. Le Fort's practice, a clear case of gonorrhœal rheumatism in a young woman. Many joints were at first affected, but finally the affection became localised in the elbow, and ankylosis followed. The reason why there were so many diverse opinions on the nature of gonorrhœal rheumatism was, because observers had generally tried to make one theory explain all the cases; whereas, clinically the differences were too marked in different cases to be always due to the same cause. For example, in one case a patient each time he caught gonorrhœa, would suffer from what Lasègue called extracapsular lesions; that is, circumarticular fibrous tissues, tendons, ligaments, and various synovial sheaths, about the heel or tendo Achillis, for example, would suffer, a large number of localities being involved. This was the true infective generalised form of gonorrhœa. In another case, on the contrary, only one joint, and that a large one, such as the knee, elbow, or wrist, would suffer. Such cases might be very severe, and last a long time, irrespectively of the gonorrhœal discharge, and it would be useless to treat the urethral discharge with a view of influencing the arthritis. There was often pus in the joint and cure by ankylosis. To this form the pyæmic theory of Lasègue was applicable. Finally, there was a third form, which was accompanied by high fever, by multiple serous articular effusions, and which, in contradistinction to the preceding forms, implicated the endocardium. Such cases were, in M. Barthélemy's opinion, probably instances of ordinary rheumatism developed in an arthritic subject through disturbance of the system caused by gonorrhœa.

Arthur Cooper.

Article 4373.

KOTTMAYER ON THE DETECTION OF ALBUMEN IN URINE BY MERCURIC CHLORIDE.

The chemist Kathrein recommended—in No. 52, 1884, of the *Pharmaceutische Post*—a solution of mercuric chloride as the most delicate test for albumen in urine; saying, 'By the addition of a few drops of a 10 per cent. solution of mercuric chloride, urine containing ever so minute a trace of albumen immediately becomes distinctly turbid; in the presence of greater quantities of albumen a whitish-yellow precipitate, *i.e.* a compound of mercuric oxide with albumen, will form, which is completely soluble in a solution of 10 per cent. of hydrochloric acid.' G. Kottmayer (*Die Fortschritt*, April 20), quoting this statement, remarks that there are several points to be solved, viz: What ought to be the reaction of the urine before the addition of the mercuric chloride? Has the urine previously to be acidified? and, if so, by means of what acid? How is the solution of the re-agent to be prepared, mercuric chloride being soluble in water at mean temperatures only in the proportion of 1 to 16? The author, in his numerous examinations of urines, never omitted to avail himself of Kathrein's method for the discovery of albumen, which would recommend itself by its simplicity. The result of all these experiments, however, was, although surprising, not altogether satisfactory; the solution of mercuric chloride producing in every case either a marked turbidity or a copious flaky precipitate, both of which disappeared after the addition of powdered chloride of sodium, whilst the most delicate tests for albumen, namely, nitric acid, picric acid (trinitrophenic acid, $C_6H_3\ (NO_2)\ 3O$), and potassio-mercuric iodide, had entirely failed in showing the presence of albumen.

According to Kathrein's statement, therefore, albumen ought to be present. The correctness of this, however, becomes doubtful, as the impotence of these tests to evince the slightest indication of albumen, although such copious precipitates are produced by mercuric chloride, is contradictory to the accepted facts.

The greater number of the urines examined by the author had the usual slightly acid reaction, and formed with mercuric chloride precipitates, which dissolved in a solution of chloride of sodium, whilst no indication of the presence of albumen was shown by the ordinary tests. Now, if these precipitates were not caused by albumen, what was the chemical component of the urine producing such specific reaction with mercuric chloride? Was it an accidental, a pathological, or a normal constituent? Several experiments would lead to the last conclusion.

Liebig already had founded his method for the quantitative determination of urea on the property of forming precipitates with mercuric salts, of certain normal constituents of the urine. For this purpose mercuric nitrate is used; but mercuric chloride likewise produces in non-albuminous urines of a naturally slightly acid reaction a precipitate of urea and mercury, which again disappears on the addition of chloride of sodium or of diluted acids. It was evidently this precipitate, which has been erroneously interpreted by Kathrein as being caused by albumen. This error, however, was partly produced (although it by no means justifies such a false diagnosis) by the peculiar behaviour of the urea with the solution of mercuric chloride; *i.e.* if a solution of urea of neutral or of acid reaction, by having been slightly acidified, be treated with a solution of mercuric chloride, no precipitate will form except after the addition of an alkali; and, moreover, the latter precipitate will be insoluble in a solution of chloride of sodium, but will readily dissolve in acids. The urea in the urine in this case behaves differently from a solution of pure urea; the former evidently being modified by the presence of another component, which must be looked for amongst the urates: and, in fact, it has been proved that the acid phosphates, and especially the alkaline phosphates, powerfully influence the behaviour of urea, as is fully borne out by the following two experiments.

1. A 2 per cent. solution of urea was acidified with a minute quantity of phosphoric acid, and

treated with a likewise slightly acid solution of phosphate of soda. An addition of mercuric chloride caused when the reaction was acid, as in urine, a flaky precipitate, which, like that in urine, dissolved in chloride of sodium and in diluted acids. But *no* precipitate was formed by mercuric chloride in a solution of urea acidified with phosphoric acid, which, however, on the contrary, was the case after the addition of a solution of phosphate of soda; on the other hand, this sodium salt and mercuric chloride alone produced no precipitate, which, however, instantaneously appeared on addition of a solution of urea.

2. To a slightly acid, perfectly non-albuminous urine, which formed, with mercuric chloride, an exceptionally copious precipitate, ammonia and a solution of sulphate of magnesia were added, in order to completely eliminate all the phosphates. The filtrate, free from phosphates, was acidified with hydrochloric acid, and treated with a solution of mercuric chloride; no trace of a precipitate appeared, which, however, on the addition of acidified phosphate of soda, formed, in proportion to the quantity of the salt added, either a mere turbidity or as a rapidly-settling flaky precipitate. This precipitate was likewise soluble in a solution of chloride of sodium and in acids. Other solvents for these precipitates of mercuric urea are iodide of potassium (hence potassio-mercuric iodide will not cause a precipitate in urine), and ammonic chloride. Therefore, in order to secure the success of the experiment, after the elimination of the phosphates, *no* considerable excess of ammonia must be employed.

These experiments lead to the conclusion that slightly acid urine containing urea and phosphates, two rarely missing components, will form with mercuric chloride, even in the absence of albumen, a precipitate which is not a mercuric albuminate, but a compound of mercuric urea, of which it is still unknown whether the hydrochloric acid, the phosphoric acid, and the sodium, form any part, or in what proportion, of its elementary constituents.

The mercuric chloride test for albumen, proposed by Kathrein, will therefore lead to an erroneous diagnosis. A somewhat more reliable result with mercuric chloride may be obtained by adding the solution of mercuric chloride to the urine after it has previously been strongly acidified with muriatic acid. If albumen be present, turbidity or precipitates will appear, which are *not* soluble in a solution of chloride of sodium, a fact which is in a causal connection with the other; the mercuric albuminates (from the albumen of the serum or of the egg) will be dissolved in chloride of sodium and precipitated by hydrochloric acid. The mercuric chloride test for albumen in urine, which has previously been acidified with diluted hydrochloric acid, is analogous to the well-known potassio-mercuric iodide test, which has the advantage of giving more determined results.

Finally, another already longer known, convenient, and very delicate test for albumen, picric acid, may here be mentioned. Dr. George Johnson found this acid more delicate than any other known test for albumen. It is one, and not the least of Hager's many merits, to have first recommended this reagent, and likewise to have first proposed it for the quantitative determination of albumen.

As well as with albumen, picric acid likewise forms precipitates with peptone and with alkaloids—(according to Dr. George Johnson only with quinine); but these precipitates can beyond doubt be distinguished from those of albumen. The former will dissolve by aid of heat, whilst the picrates of albumen will remain insoluble, and become even firmer by high temperatures.

Dr. George Johnson mixes the urine, if of a naturally acid reaction, directly with a solution or the powder of picric acid. In the presence of larger quantities of albumen, turbidity or precipitates immediately will form; if there be a mere trace of albumen, this will take place gradually and more slowly, but may be accelerated by means of heat. If, according to Hager's suggestion, the urine be acidified at once with a very minute quantity of hydrochloric or acetic acid, the reaction will take place more rapidly and energetically, especially when assisted by heating.

(For fuller information *see* Hager's *Handbuch*, vol. ii., p. 1181, and vol. iii., pp. 852 and 1180, and No. 4, 1884, *Pharmaceutische Post.*)

FERD. AD. JUNKER, M.D.

ARTICLE 4374.

WIDMARK ON THE RELATION OF BACTERIA TO DACRYOCYSTITIS AND SERPIGINOUS ULCER OF THE CORNEA.

DR. JOHAN WIDMARK, teacher of ophthalmic surgery in Stockholm, contributes a paper on this subject to the *Nord. Med. Arkiv*, Band xvi., Häft 4. The observations of Sämisch, Leber, Schmidt-Rimpler, Krausse, Hirschberg, and others, have rendered it very probable that serpiginous ulcer of the cornea is the result of infection; and that, when it appears as a complication of dacryocystitis, its origin must be sought in an immigration of micro-organisms from the lacrymal sac. Dr. Widmark has made researches with the object of testing the correctness of this supposition, and his investigations have been carried on in the clinical wards of Professor Rossander and in the pathological laboratory of Professors Key and Wallis. He examined thirty-seven cases of dacryocystitis and two of serpiginous ulcer of the cornea, and found microbes in all. There were always micrococci; they were rarely isolated, but often formed streptococci, and more frequently diplococci, being occasionally so closely connected as to simulate bacteria. They almost always lay free in the secretion, and only in exceptional cases were they united to cells. Occasionally they were surrounded by a clear zone. In his researches, the author used a one or two per cent. solution of fuchsine. A glass plate, having on it a very fine layer of the secretion to be examined, was immersed in this solution for fifteen or twenty seconds; it was then washed with distilled water, carefully dried, and put up in Canada balsam.

Pure cultivations of the micro-organisms were very easily made in a jelly of the serum of ox's blood, at a temperature of 86° F. With these cultivations, inoculations were performed on the corneæ of rabbits, the most recent used being the fourth and the oldest the twenty-first. The inoculations were made in the following manner. A Gräfe's knife was introduced obliquely into the centre of the cornea, to the depth of three or four centimètres, without perforating it. In withdrawing the knife the incision was enlarged, so that the wound had the form of a pouch, into which a small quantity of the cultivation was introduced by means of a spatula.

Twenty inoculations were made, and all were followed by more or less intense inflammation, which almost always took the form of ulcerative keratitis with hypopyon. The base of the ulcer generally presented a shiny appearance: the edge was infiltrated, and from it proliferations frequently radiated into the neighbouring parts.

In ten experiments, where sterilised gelatine was introduced in exactly the same manner, the results were negative.

The micro-organisms of the ulcer caused by inoculation were cultivated, and the corneæ of six other rabbits were inoculated therewith. In all these cases inflammation followed, having the same characters as those above described.

The introduction of cultivations of the micro-organisms under the skin of five rabbits produced ulcers, inoculations with which on the cornea produced the same form of keratitis.

In order to prove the presence of micro-organisms in the infected tissue, Dr. Widmark employed the following method. The preparations were dipped for an instant in a 2 per cent. solution of gentian-violet; they were then washed with distilled water, and examined in this fluid. This method allowed the presence of the micro-organisms to be easily traced at the beginning of the inflammation; but afterwards it became more difficult to do so, in consequence of the very active migration of cells. Dr. Widmark, however, succeeded even on the seventh day of inflammation in finding micro-organisms, infiltrating in large masses the edges of the wound and the surrounding tissues.

From his researches, Dr. Widmark concludes that micro-organisms are the cause of the severe form of keratitis which complicates catarrh of the laryngeal sac, and that they probably give rise to phlegmonous dacryocystitis, as well as to the blepharadenitis which sometimes follows dacryocystitis.

He also endeavours to explain why suppuration rarely follows operations on the eye, although it is impossible to fully carry out the antiseptic method. He attributes it to the active nutrition of the eye, to the smallness of the wound, to the improvements in operative procedures, but also to what he calls the natural drainage of the eye. The tears which constantly moisten the conjunctival sac and the anterior part of the eye, and escape by the laryngeal canal, easily carry away micro-organisms. If the operation have penetrated the cornea, the abundant and rapid secretion of the aqueous humour acts in a similar way in their removal. A. HENRY, M.D.

ARTICLE 4375.

ALBERTONI AND TIZZONI ON THE EFFECTS OF REMOVAL OF THE THYROID BODY.*

LIKE Schiff, these authors have found that rabbits support removal of the thyroid body well; and that dogs die. Unlike most other experimenters, they have had a small proportion of dogs that survived the operation: namely, four out of twenty-three. The phenomena observed after thyroidectomy are in part the same as have been noted by other authors: tremors, convulsions of various kinds and degrees, hypæsthesia, denutrition, dilatation of the pupils, redness of the ears, and great heat of the skin, which after some days disappears, difficulty in seizing and masticating food, especially solids, and kerato-conjunctivitis. Above all, disturbances of respiration have been noticed, attacks of dyspnœa, spasmodic contractions of the abdominal muscles, increase of frequency and alteration of rhythm in respiration, increase of frequency in the pulse, which remains regular, and finally, another phenomenon not hitherto recorded, namely, albuminuria. The authors believe they have found the explanation of all these phenomena in the condition of the blood. They do not, however, venture to hint that the condition of the blood itself requires explanation. The arterial blood, after the extirpation of the thyroid body, becomes venous; that is, it contains a quantity of oxygen equal or inferior even to that of venous blood.

Tracheotomy makes no difference in regard to this point. The small quantity of oxygen, therefore, does not depend on any mechanical impediment to respiration.

Another fact not hitherto observed is the degeneration of nerves, even quite distant from the seat of operation; as, for example, in the sciatic. This degeneration occurs in limited spots along the course of the nerve-fibres, like that which is produced by stretching. It is marked by the usual changes in the medullary sheath, which finally disappears. The axis-cylinder is destroyed; there is increase of the protoplasm of the fibre, with multiplication of its nuclei; and, lastly, there is considerable increase of the connective tissue which separates the individual nerve-fibres, especially at the degenerated points.

Pending the more extended examination of the nerve-centres, the authors do not wish to hazard a guess as to the significance of this nerve-degeneration; whether it be an effect of the diminution of oxygen in the blood, or whether it be itself the cause of some of the nervous phenomena. Possibly it may be due simply to pressure from the violent contractions of the muscles.

At any rate, the fact of this degeneration of the nerves was established in various cases; and, if it be found in the nervous centres, it will still further explain the phenomena.

It should have been mentioned above that of the four dogs that survived one has since been killed. No traces of the removed gland, or of accessory thyroid bodies, were found.

WILLIAM R. HUGGARD, M.D.

ARTICLE 4376.

ROTTER ON THE INDICATIONS FOR EXTIRPATION OF GOÎTRE.

IN a paper on the operative treatment of goître (*Archiv für Klin. Chir.*, Band xxxi., Heft 4) Dr. Josef Rotter, of Würzburg, points out that, before the surgeon performs extirpation of the thyroid body, it is desirable that he obtain some precise and reliable indications for a procedure so difficult and dangerous. The views of surgeons on the indications, whilst agreeing in general outline, still differ on several not unimportant points. Those who have been fortunate in their experience of this operation believe it to be almost quite free from danger, whilst those who have had less success are apt to over-estimate its dangers. More than 600 cases of removal of the thyroid gland have now been recorded; and during the last three years the mortality, it is asserted, has been about 10 per cent.

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* ALBERTONI AND TIZZONI.—On the Effects of Extirpation of the Thyroid. (*Gazz. degli Ospitali*, June 3, 1885.)

Although some operators have had a much lower rate of mortality, and death from the operation might possibly have been avoided in some of the fatal cases, still removal of the thyroid body cannot be regarded as a procedure that is free from danger. Unexpected and serious complications are liable to occur in any instance, and the surgeon cannot estimate the probabilities of success so closely in this operation as, for instance, in amputation in the thigh. Still, though the difficulties and dangers of the operation cannot well be over-estimated, the surgeon must take into consideration the fact that the subject of goître is exposed to many serious dangers, particularly that of very sudden and alarming attacks of dyspnœa.

Dr. Rotter holds that it is the duty of the surgeon to undertake extirpation of the enlarged thyroid body under any of the following circumstances. If the tumour have caused any attacks of extreme dyspnœa, this is a clear indication for the performance of the operation. It should be undertaken also if the goître have caused such disturbance of breathing, as to render the patient incapable of attempting any active bodily exertion. If, in a case of rapidly enlarging goître the iodine treatment have failed, and the disturbances caused by the tumour have not been thus relieved, the surgeon should, without waiting for any attack of severe dyspnœa, strongly urge an early operation. In cases of large goître of long standing, alterations of the trachea are likely to take place, which may place the patient's life in danger before the operation, and afterwards may complicate the healing process. A fourth indication is presented by serious difficulty in deglutition. Finally, there are cases in which the operation, though it cannot cure the patient, may relieve him of some condition that renders life intolerable; such, for instance, as those of an incurable thyroid fistula and of a goître which, by its great size, prevents the patient from pursuing his occupation.

The existence of a suffocating goître is naturally no contra-indication, but rather an absolute indication for extirpation. On the other hand, under the remaining circumstances, the surgeon should hold his hand when the patient presents an unfavourable general condition which cannot be attributed to the disease of the thyroid body. In the case of any associated morbid condition which is clearly due to the presence of the goître, this restriction is not to be observed. A calcified and fixed goître should not be interfered with, except in the presence of some pressing indication. Recent improvements in operative methods have rendered possible the extirpation of very large and broadly based goîtres.

In the opinion of Wölfler and Higguet, extirpation of the thyroid should not be performed on patients above the age of 60. Liebrecht, however, reports that the three oldest patients on whom he operated, and who were between 60 and 70 years of age, all recovered. In the tables collected by the author of cases under Professor Maas and others, it is shown that of twelve persons above the age of 60 on whom strumectomy was performed three died, but the fatal result was due in one case to septic poisoning, and in another to hæmorrhage, causes which certainly are not peculiar to old age. The third patient died from pneumonia on the twenty-first day from that of the operation. Advanced age, therefore, cannot be regarded as a contra-indication of the operation. Liebrecht advises that the operation should not be performed on any subject with extreme atheroma of the vessels. Dr. Rotter, however, alludes to a case in which, though the patient was affected with this condition in a high degree, the operation was not followed by hæmorrhage or any other complication.

In considering when it is necessary to perform total and when only partial extirpation of the thyroid body, Dr. Rotter states that the minor operation should be applied to those cases in which but one lobe is enlarged, and this affected lobe is connected with a healthy portion of the gland by a thin and narrow pedicle. In regions where goître is endemic the extirpation should always be total, in order that relapse may be prevented. It has been proved by the tables of Wölfler and Liebrecht, that partial is not less dangerous than total removal. Dr. Rotter does not share the views of Kocher and Reverdin with regard to the so-called cachexia strumipriva as a special danger after total removal. The symptoms of this cachexia, it is held, are marked by the unmistakable impress of cretinism. This condition of cachexia, according to H. Bircher, occurs as a consequence, not of absence of the thyroid body, but of a chronic general condition, which causes in its first stage the development of goître, and, in its second stage, symptoms of cretinism. The subjects of excision of the thyroid body become cretins, not because the gland has been extirpated, but because they remain in districts where goître is endemic, and expose themselves to further infection. Rotter also takes this view, and, therefore, does not regard the so-called cachexia strumipriva as a contra-indication of total extirpation of goître.

W. Johnson Smith.

Article 4377.

LIEBRECHT ON RESECTION OF THE ANKLE.

In the *Bulletin de l'Académie Royale de Médecine de Belgique*, tome xviii., No. 12, Dr. P. Liebrecht, of Liège, describes an operative procedure which he has recently devised for resection of the tibio-tarsal articulation in cases of fungous arthritis. The methods that have hitherto been practised are all, he states, attended with much labour, in consequence of the difficulty in exposing and dividing the numerous ligaments of the ankle, and are apt to cause injury to the tendons, vessels, and nerves around the joint. The following is a description of the author's method, which, however, has up to the present time been performed only on the cadaver. The skin incision is made from the middle of the posterior border of one malleolus to the middle of that of the opposite malleolus. The tendo Achillis is then divided on a director. A second division, perpendicular to the first, is now made along the inner border of the tendo Achillis. This is about 2½ inches in length, and, passing downwards, almost reaches the inner tuberosity of the calcaneum. The soft structures between the tendon and the bone are now dissected away, so as to expose the capsule of the joint and the posterior peroneo-astragaloid ligament. On excision of these ligaments, the astragalus and the lower extremity of the tibia are exposed to view, and also the line of articulation between these bones and, below this, the astragalo-calcanean line. The tendon of the flexor longus pollicis is then displaced inwards from the posterior surface of the tibia, and all the tendons, vessels, and nerves situated behind the two malleoli can now be easily pushed forwards, so as to expose the whole of the posterior aspect of the joint. If the bones be hard, as is mostly the case in the cadaver, the posterior surface of the astragalus, at one of its borders near a malleolus, should be attacked with chisel and mallet. A notch should first be made along the whole width of the bone, so that by subsequent action of the chisel the upper portion of the astragalus may be removed in one piece. If necessary, one or more slices of bone may be afterwards removed. The end of the tibia, if diseased, may be excised in a similar manner. If the diseased bone be very soft, it may be scooped away. The articular surfaces of the malleoli having been exposed, they may be scraped or removed with the chisel. The lateral ligaments may now be divided with a blunt-pointed bistoury. If any fragments of the astragalus remain adhering to the capsule or ligaments, they should be torn away with forceps. A large cavity is thus formed, at the bottom of which is found the articular capsule of the front of the foot, which may be readily scraped, or, if necessary, excised with scissors. If the loss of bone be not very great, and particularly if the malleoli have been partially preserved, the cavity may be left to become filled up by granulations; and then, after recovery, the patient will have a foot that is almost normal. When it has been found necessary to remove much bone, the opposed osseous surfaces of the leg and tarsus should be fixed together, so as to attain osseous ankylosis. Finally, the divided extremities of the tendo Achillis and edges of the external wound should be brought together by sutures.

Dr. Liebrecht claims for this operation the following advantages. 'It does not cause any serious primary lesion, or necessitate any useless sacrifice; the soft parts and the periosteum are not bruised in the course of the operation. It offers more chances than the other methods of preserving a limb of normal form, and better assures the integrity of its functions. It may be easily and quickly performed. Owing to the position of the wound, the discharge of secretion will be effected without any difficulty, and the process of repair will be carried on much more rapidly.' W. JOHNSON SMITH.

SURGERY.

RECENT PAPERS.

4378. HUTCHINSON.—Excision of both Breasts at the same time. (*Brit. Med. Jour.*, June, p. 1190.)

4379. LUND.—Coates' Worsted Truss for Infantile Inguinal Hernia. (*Brit. Med. Jour.*, June.)

4380. RIVINGTON.—Ligature of the First Part of the Axillary Artery, and First Part of the Subclavian and Innominate Arteries. (*Brit. Med. Jour.*, May, p. 1040.)

4381. SIMPSON.—A Case of Colotomy. (*Brit. Med. Jour.*, May, p. 1039.)

4382. FENWICK.—Latent Vesical Calculus. (*Brit. Med. Jour.*, May, p. 1046.)

4383. LUND.—Suprapubic Puncture of the Bladder. (*Brit. Med. Jour.* June, p. 1237.)

4384. JONES.—A New Elbow-splint. (*Lancet*, June, p. 1125.)

4385. SPITTA.—A New Bunion Splint. (*Brit. Med. Jour.*, May, p. 1110.)

4386. MACEWEN.—Cerebral Surgery. (*Lancet*, May, p. 881.)

4387. TAIT.—Saccular Dilatation of the Urethra. *Brit. Med. Jour.*, May, p. 982.)

4388. LINDÉN.—A Case of Luxatio Humeri Erecta. (*Finska Läkaresällskapets Handlingar*, 1885, Nos. 1 and 2.)

4389. WHEELER.—Resection of the Humerus at the Shoulder-Joint. (*Dublin Jour. of Med. Science*, June.)

4390. THIRIAR.—On Cholecystectomy. (*Revue de Chir.*, No. 5, 1885.)

4391. RICHELOT.—The Functional Condition of the Lower Limb after Transverse Fracture of the Patella. (*Rev. de Chir.*, No. 5, 1885.)

4392. HARDIE.—The Radical Cure of Inguinal Hernia. (*Med. Chron*, June 1885.)

4393. OBERST. — Acute Suppuration after Forcible Rupture of Articular Adhesions. (*Centralbl. für Chirurgie*, No. 21, 1885.)

4394. THOMSON.—Comminuted Fracture of the Head of the Tibia. (*Trans. of Acad. of Med. in Ireland.*)

4395. WINSLOW.—Pyloric Stenosis. (*Amer. Journ. of Med. Sciences*, April 1884.)

ART. 4378. *Hutchinson on Excision of both Breasts at the same time.*—Mr. Jonathan Hutchinson details a case in the *Brit. Med. Jour.*, June 1885, p. 1190, in which he excised both mammæ at the same time, an operation very rarely done, and one that is viewed with disfavour by many good authorities. An unmarried lady, aged 46, consulted Mr. Hutchinson with wasted mammæ, in each of which were several knotted masses. Three aunts had died of cancer. It was decided to remove both breasts; and this was done under Listerian precautions, healing being complete on the eighth day.

4379. *Lund on Coates' Worsted Truss for Infantile Inguinal Hernia.*—Mr. Edward Lund refers in the *Brit. Med. Jour.* to the worsted truss described by Mr. Coates in 1849, and strongly advises its use. A skein of Berlin wool is looped across the abdomen. One end of the loop is placed directly over the outer abdominal ring, the hernia being reduced previously. The folded worsted is passed horizontally across the abdomen, put above the line of the crest of the os pubis, to the opposite side, round the hip behind the pelvis, and over the hip of the side of the hernia. The folded end is then passed through the loop of the skein, and will here form a knot or a bulged portion, which must be carefully adjusted, so as to lie against the hernial opening; and, being carried down the upper part of the thigh, between it and the scrotum, if a male, it is brought round the external side of the thigh, near to the top of the great trochanter, and there tied or fixed with a safety-pin to the band of worsted already round the pelvis. There is an advantage in the fact that the child can be bathed with the truss on, and a fresh one then be applied, the first being dried and cleaned for future use.

4380. *Rivington on Ligature of the First Part of the Axillary Artery, First Part of Subclavian and Innominate Arteries.*—In the *Brit. Med. Jour.*, May 1885, p. 1040, Mr. W. Rivington describes a method of ligaturing the axillary artery. An oblique incision is made over the line of apposition of the deltoid and pectoralis major muscles, which are simply separated from each other, and held apart with retractors. To obtain more light and easier access to the vessel, the oblique incision may be shortened, and a transverse incision added, dividing the skin and fascia at the lower border of the clavicle, and separating the clavicular head of the pectoralis major from its attachment to the bone. The triangular flap of skin and fascia and the head of the muscle can then be turned down without interfering with the nerve-supply. By using the handle of the scalpel, the edge of the pectoralis minor may be defined, and the artery may subsequently be cleared, and tied in any part of the space between the subclavius muscle and the lesser pectoral muscle.

4381. *Simpson on a Case of Colotomy.*—In the *Brit. Med. Jour.*, May 1885, p. 1039, Mr. Thomas Simpson relates the case of a patient, 71 years of age, who in November 1880 complained of increasing trouble in obtaining relief of the bowels, which eventually became completely confined, and no food could be retained. On Dec. 12 colotomy was performed successfully, enormous quantities of fæces being passed. No stricture of the rectum could be detected at the time of the operation. The patient made a good recovery, and was able to do work two months after the operation. About four years subsequently, during coughing one evening, he felt something give way, and found that a large swelling had appeared just below the artificial anus, and a great deal of blood oozed from the part, accompanied with great pain. Within forty-eight hours, death took place from exhaustion. At the *post mortem* examination, it was found that a large loop of the ileum had been forced through the abdominal walls below the artificial anus, and had there become strangulated. The case is interesting on two grounds; first, showing that the operation may be attempted on old people with a good chance of success; and, secondly, on account of its peculiar termination.

4382. *Fenwick on Latent Vesical Calculus.*—In the *Brit. Med. Jour.*, May 1880, p. 1046, Mr. H. Fenwick points out that stone in the bladder is frequently overlooked because calculous symptoms are absent, owing to—(1) anæsthesia of the mucous membrane of the bladder, well exemplified in a case mentioned in Deschamps' *Traité de la Taille*, vol. i., p. 166; or (2) mechanical causes preventing the stone from falling upon the sensitive neck of the bladder. Mechanical conditions may be of three kinds—(*a*) adherence of the calculus to the walls of the bladder; (*b*) sacculation of the bladder-wall; and (*c*) pouching of the vesical *bas fond*. The author stated that four out of thirteen cases of calculus, lately seen by him, fell under the category of latent stone. In one instance, a calculus, weighing over a pound and a half, was successfully extracted.

4383. *Lund on Suprapubic Puncture of the Bladder and Vesical Calculus.*—In the *Brit. Med. Jour.*, June 1885, p. 1237, Mr. Lund advocates this mode of puncturing the bladder, and uses a specially constructed trocar and cannula, just long enough to secure its entrance into the bladder, and with a cutting edge lineal and vertical instead of being triangular, so that the incision is converted into a circular aperture on pushing home the instrument. The cannula must be large enough to allow a vulcanised India-rubber drainage-tube to be passed when the trocar is withdrawn. This the bladder tolerates for a lengthened period, five, and even thirteen weeks in one case. The only practical objection to be urged against the suprapubic puncture of the bladder is, that the opening is not so favourably placed for drainage as when the rectum is tapped. Assuming that the patient always lies on his back, there is great force in the objection, but still it is not difficult to make the tube act as a siphon, and so completely drain the viscus. [At section 1051 : 1 of the *Medical Digest*, a mass of interesting papers are noted.] Mr. Lund relates a singular instance where, in sounding a female with a short metallic catheter, a distinct click was elicited where previously a sound failed to detect any calculus. An operation was performed and no stone discovered, when on experiment it was found that the following conditions were necessary to elicit the click. 1. The instrument used must be a short hollow metallic sound, and nearly straight, so that the urine can flow easily through it. 2. The propulsive power of the bladder must be considerable, and the stream must be suddenly stopped. So long as the water flowed out freely in a continuous stream, no sound was heard; but each time the stream was suddenly stopped by the pressure of the finger over the mouth of the catheter, an audible concussion was produced, such as no one could believe to be possible, previously to witnessing the experiment. If a long male catheter with the usual almost right angled curve be used, no such results are produced.

4384. *Jones on a New Elbow-splint.*—Mr. Robert Jones gives an illustration, at page 1125 of the *Lancet* for June 1885, of a simple and effective splint for compound injuries of the elbow-joint. It is composed of two pieces of flexible sheet iron covered with felt, and connected by means of a rod of iron so twisted as to extend beyond the elbow, leaving ample room for easy change of dressing without interfering with the mobility of the joint. Messrs. Krohne & Sesemann, of Duke Street, London, and Mr. Critchley, of Upper Pitt Street, Liverpool, supply the splint, which is at the same time simple, cheap, and effective.

4385. *Spitta on a New Bunion Splint.*—In the *Brit. Med. Jour.*, May 1885, p. 1110, Mr. R. J. Spitta describes a new splint, which he has contrived in order to maintain the great toe in its normal position after continual distortion from badly fitting boots, and in cases of bunion, or enlargement of the joint. The splint can be worn during the day, provided the boot be of a good size and with square toes. The apparatus consists of a well-fitting band of steel, suitably covered, about half an inch wide, passing round the heel from the base of the toe on the inner side, to a corresponding joint on the outer border of the foot, being kept in position by a shaped lacing-piece across the arch, and passing beneath the sole. To the steel band is attached, at its inner extremity, a rack and pinion, by which the toe can be drawn away from the median line to any extent desired, the pressure of the screw on the foot being relieved by a moulded steel plate, accurately fitted to the side of the foot, and which is cup-shaped over the joint or bunion, and covered with soft leather. From the screw and rack, a firm piece of metal is continued on to the end of the foot, and is provided with a leather stall, which laces round the toe and grasps it tightly. Gradual extension is applied so that in a week or two the toe becomes quite normal in position. Messrs. Wright & Co., of New Bond Street, are the manufacturers of the splint. [In sect. 1781 : 1 of the *Medical Digest* several plans for treating bunions are referred to; the most reliable, and at the same time most simple mode being that described by Mr. Turley in 1852. It consists of a tin plate of the exact size of the foot with slits cut, through which a broad tape can be passed, so that each toe is kept in exact position. This metal plate can be riveted to a cork sole with corresponding slits cut therein, and worn without the discomfort attending more complicated bunion splints.—*Rep.*]

4386. *Macewen' on Cerebral Surgery.*—In the *Lancet*, May 1885, p. 881, Dr. W. Macewen records the notes of a man, aged 36, who in August 1883 fell downstairs, and was rendered unconcious for twelve hours. In November 1883 the patient was admitted into the Glasgow Royal Infirmary, with impairment of power in the left arm, accompanied by muscular twitchings and pricking sensations in some parts. A lesion was diagnosed in the motor cortex of the upper half of the right ascending frontal convolution, probably due to irritation set up around an extravasation of blood, due to the previous injury. In December the author trephined, and found a membrane-like patch over the surface of the brain, involving the arachnoid and pia mater along with the external surface of the grey matter; there was also blood effused into the substance of the brain in the ascending frontal convolution. All this was removed, the bone was replaced after having been broken up into several small pieces, and the wound was dressed with eucalyptus gauze. The patient made a perfect recovery without a bad symptom, and two months afterwards was able to do his ordinary work.

4387. *Tait on Saccular Dilatation of Urethra.*—In the *Brit. Med. Jour.*, May 1885, p. 982, Mr. Lawson Tait relates a case, which he published in the *Lancet*, October 1875, of a lady, who suffered from a sacculated dilatation in the floor of the urethra. Until the beginning of this year, the author states, he had never seen such a case, but during the past three months he has met with three cases almost exactly similar. The symptoms in all were precisely alike. There was a constant escape of fœtid ammoniacal purulent urine, which did not occur always on ordinary micturition, but only when there was any strain, or upon pressure, or change of position, and sometimes quite independently of the patient's control. On examination a tumour was found, apparently continuous with the neck of the bladder, presenting itself between the lips of the vestibule, closely resembling an ordinary cystic vaginocele. When a catheter was passed along the roof of the urethra, it went into the bladder and clear urine was drawn off; but, if passed along the floor of the urethra, it entered the cavity of the tumour, bringing away putrid urine. On each case, the author operated with complete success. This form of disease is stated to be, most likely, due to an error of development, by which a small offshoot of the urethra, like a diverticulum of intestine, is the result of faulty union of the primal folds; and this becomes of pathological importance when women become accustomed to those errors of urination to which they are all more or less addicted. [Besides the cases referred to in sect. 1098 : 1 of the *Medical Digest*, others are reported in the *Brit. Med. Jour.*, March 1882, p. 613, and February 1885, p. 343; also in the LONDON MEDICAL RECORD, 1885, p. 93.—*Rep.*] RICHARD NEALE, M.D.

4388. *Lindén on a Rare Form of Dislocation of the Humerus.*—A man, aged 36, had his left humerus dislocated during a fray. He had been thrown to the ground, and, while he lay on his back, both arms had been pulled upwards by his opponent, a violent kick being at the same time given to the upper third of the humerus. When Dr. Lindén saw him three days after the injury, the left arm was stretched upwards; the humerus formed an angle of about 130° with the acromion and clavicle; the forearm was pronated, and lay horizontally over the head, the left hand being supported by the right. The soft parts of the humerus were much contused. There was severe pain in the arm; the hand was numb, and was supported by the hand of the opposite side. All attempts to bring the humerus into the horizontal position only caused severe pain. There seemed to be fracture of the humerus near the attachment of the deltoid, and on palpation the subacromial space was empty; on the other hand, the head of the humerus could be felt with unusual distinctness in the axilla. It lay below and somewhat to the inner side of the glenoid cavity, near the lower border of the pectoralis major. Under chloroform, the arm presented considerable resistance to attempts to bring it into the horizontal plane; it was, however, completely reduced by extension upwards and outwards. For six weeks the arm remained powerless; two and a half months afterwards it was still weak, but the man was able to work. Dr. Lindén has found only five cases of this rare form of dislocation recorded in medical literature. Two are described by Middeldorpf (*Schmidt's Jahrbücher*, 1880); one by Busch (*Archiv für Klinische Chirurgie*, Band iv.); one by Nikolaysen (*Norsk Magazin for Lægevidenskaben*, 1873); and one, occurring in Bardeleben's clinic, by Alberti (*Deutsche Zeitschr. für Chir.*, Band xx.). In all these cases, the dislocation was produced by the arm being forcibly struck upwards. In one of Middeldorpf's cases, the injury was the result of a fall through a floor; in Busch's case, of a fall down a ladder while the patient was carrying a heavy burden on his shoulder. In Middeldorpf's other case, the arm was violently struck upwards by a windlass during a fall. In Nikolaysen's patient, the humerus was dislocated while he was trying, with his arm extended upwards, to prevent a boat from slipping off a vessel. In Alberti's case, a man was endeavouring to pull down a rearing horse by the bridle, when the animal struck his uplifted arm with one of its forefeet. In all these cases, the symptoms were similar to those above described. Dr. Lindén believes that the difficulty in reduction in his case was caused by the greater tuberosity of the humerus resting against the edge of the joint.

A. HENRY, M.D.

4389. *Wheeler on Resection of the Humerus at the Shoulder-Joint.*—In the *Dublin Journal of Medical Science* for June is published a paper on resection of the head of the humerus, read before the Surgical Section of the Academy of Medicine in Ireland by Dr. W. I. Wheeler, of Dublin. In this paper, the author records the histories and results of three recent instances, in which he performed the operation of resection of the humerus at the humero-scapular joint. In all three cases, resection was performed for disease of the shoulder. One patient was a woman, aged 37; the other two were men, aged respectively 40 and 30 years. In each case, the operation resulted in rapid cure. In his comments on these cases, Dr. Wheeler states that, although resection of the shoulder-joint is not performed for articular disease, there are other causes, apart from such disease, which may demand resection of the joint, such as gun-shot wounds, old and painful as well as compound dislocations, non-malignant tumours of the head of the bone, and compound and comminuted fracture of one or both of the bones forming the articulation. Dr. Wheeler prefers in the operation the longitudinal incision through the deltoid muscle, which, he thinks, is the one calculated to afford the best results. The preservation, if possible, of the long tendon of the biceps is strongly advocated. In many cases of diseases it is certainly destroyed, and yet good results have ensued; but Dr. Wheeler states that he has seen more useful arms and more extensive motion follow when it has remained intact. Excision of the shoulder-joint, it is pointed out, is a favourable operation, the mortality being about 18 per cent. in civil practice, and about 35 per cent. in military surgery.

4390. *Thiriar on Cholecystectomy.*—M. Thiriar, of Brussels, in a communication to the French Congress of Surgery (*Revue de Chir.*, No. 5, 1885) deals with the following objections to cholecystotomy, an operation first performed by Langenbuch of Berlin in 1882. 1. The existence of a gall-bladder is necessary for the purposes of digestion in man. 2. Calculi may be formed elsewhere than in the gall-bladder. 3. The operation is a very serious and dangerous one. 4. Cholecystotomy or the production of a biliary fistula ought to be preferred. It is argued by M. Thiriar that the gall-bladder is not indispensable to the regularity of the digestive functions in man. This organ is absent in many of the mammalia, and occasionally it is found completely closed and atrophied in man. The formation of calculi elsewhere than in the gall-bladder is an extremely rare occurrence, except in certain pathological conditions which give rise to such formation in the biliary ducts and canals. These pathological conditions (cancer, obstruction of the biliary passages), however, constitute a formal contra-indication to operative interference. Cholecystotomy, it is acknowledged, is decidedly a difficult and delicate operation, but in considering the much diminished dangers of peritoneal lesions when produced with strict observance of the antiseptic method, M. Thiriar is of opinion that this procedure is the least severe and the least dangerous of all the varieties of laparotomy. It is a justifiable operation, he holds, in cases of biliary lithiasis that have resisted medical treatment, and in which violent paroxysms occur from time to time. With regard to the operation of cholecystotomy that has been proposed by Mr. Lawson Tait, although it is less difficult than cholecystectomy, it is attended by the inconvenience of leaving a biliary fistula, a condition not free from danger. Moreover, as it does not remove the organ in which gall-stones are formed, the production of these bodies may be continued. Two cases of cholecystectomy are reported in this paper. In one, the patient was a woman, aged 43. The gall-bladder contained a mass of thick bile, but no calculus. The operation lasted during one hour and a half, and resulted in complete success, without any complications. The subject of the second case was a woman in the fifth month of pregnancy. The gall-bladder contained twelve calculi. The operation lasted during one hour, and proved successful. The progress towards recovery was uninterrupted, and the pregnancy followed the usual course.

4391. *Richelot on the Functional Condition of the Leg after Transverse Fracture of the Patella.*—In a paper read at the French Congress of Surgery in April, and published in the *Rev. de Chir.*, No. 5, 1885, M. Richelot, of Paris, holds that, when persistent lameness follows transverse fracture of the patella, such condition is due not to separation of the fragments of the bone, but to atrophy and consequent loss of power of the quadriceps muscle. There are many subjects of old fracture of the patella who, notwithstanding separation of the fragments to the extent of nearly four inches, are able to walk about and to ascend and descend stairs quite as well as though the bone were normal. It often happens that the functional power of the injured limb improves the more, as the separation of the fragments continues to increase. When the rectus muscle has lost a fixed point of insertion, and can play but a very slight part in extension, there remain the two vasti muscles, the inferior attachments of which are never torn through. It is necessary, therefore, in cases of fracture of the patella, to prevent, if possible, any atrophy of these muscles. The first muscle to waste is the rectus, then the vastus internus, and, finally, the vastus externus. The atrophy is of the same nature as that resulting from arthritis, or from any other articular lesion. M. Richelot holds that, in the treatment of fracture of the patella, it is more important to prevent wasting of the extensor muscles than to attempt to bring the fragments together. Most surgeons, he states, have seen examples of good locomotion, with considerable separation of the fragments, and other examples of extreme lameness with the fragments in close or even immediate apposition. This absence of relation between the extent of the pseudarthrosis and the degree of functional impairment, indicates that wide separation of the fragments is not the essential element of the loss of power of the limb. Atrophy of the quadriceps muscle, varying much in extent in different cases, but of very common occurrence after fracture of the patella, is the main condition on the intensity and persistence of which depend the intensity and persistence of the functional impairment of the limb. Separation of the fragments certainly impairs the extending action of the rectus, but this muscle does not form more than a fourth part of the mass of the quadriceps, and the two vasti muscles always remain attached to the sides of the inferior fragment, and, therefore, if not atrophied, are sufficient to maintain the functions of the limb. When the lateral fibrous structures remain intact, and there is not an absolute solution of continuity between the thigh and the leg, it is useless, M. Richelot argues, to endeavour to bring the fragments together by a multiplicity of apparatus, or to perform arthrotomy, which, not to speak of its dangers, seems superfluous if the quadriceps be normal, and illusory if it have undergone atrophy. In the treatment of fracture of the patella, after the limb has been fixed in a simple apparatus and the most simple means of bringing the fragments together have been applied, the surgeon's attention should be mainly directed to the quadriceps muscle, and, as its atrophy is not incurable, such treatment should be carried out as is best adapted to the pressing indication of re-establishing the muscular functions.

4392. *Hardie on the Radical Cure of Inguinal Hernia.*—In a paper on the operation for the radical cure of inguinal hernia (*Med. Chron.*, June 1885), Mr. James Hardie, of Manchester, who is in favour of ligature of the neck of the sac and approximation of the pillars of the canal after exposure of the parts by open incision, states that during the last two-and-a-half years he has performed seventeen operations for the radical cure simply, and has also performed the operation in a few cases of herniotomy for strangulation. Mr. Hardie in this paper directs attention to certain modifications he has been led to adopt, and which will, he believes, be found to be material improvements. Instead of placing the ligature strictly around the neck of the sac alone, he has been in the habit of applying it around the fascia transversalis as well, so as to include a considerable thickness of tissue, and so to excite more abundant inflammatory exudation, and favour the formation of a thicker and more resistent cicatrix. With regard to the sac, Mr. Hardie leaves it *in situ*, and he cannot understand why so much trouble is sometimes expended in dissecting it out. The sac, it is held, is almost invariably obliterated after the operation. An acute inflammatory process is set up, and, to secure a free cut for its products, an incision is made through the lowest part of the sac and the overlying scrotum, through which one or more drainage-tubes can be passed into its interior. When the sac lies loosely in the scrotum, and can be readily 'stripped off,' there can be no possible objection, Mr. Hardie allows, to this being done; but he holds that when the case is one of congenital hernia, or when, from other causes, anything like 'dissecting' is required, then the procedure is an entire mistake. In applying sutures to the pillars of the canal, Mr. Hardie pushes the needle through the subjacent portion of the sac as well, so that not only have the sutures a better hold, but the whole of the parts become better incorporated into a firm cicatrix. Mr. Hardie acknowledged that the inclusion of so much tissue in the ligature of the neck of the sac renders the operation more severe than when the peritoneum alone is ligatured. There is considerable interference with the vascular supply of the coverings of the spermatic cord, as well as of the scrotum, and consequently considerable inflammatory œdema is occasioned, which is slow in subsiding. Suppuration is also likely to take place, but in one case only was it found troublesome. In one case, that of a man, 65 years of age, with a large scrotal hernia, the operation was fatal. Mr. Hardie is at present unable to make a positive statement as to the real value of this operation as a curative measure. He has examined several cases some months after the operation, and in none of them has he found any tendency to recurrence. In a man who died of phthisis, eight months after the operation, the parts were examined and found most perfect.

4393. *Oberst on Acute Suppuration after Forcible Rupture of Articular Adhesions.*—In the *Centralbl. für Chirurgie*, No. 21, 1885, Professor M. Oberst reports four cases from the hospital practice of Volkmann, on which acute suppuration followed the breaking down of articular adhesions. In each of these cases, the ankylosis had followed an acute infective process. In two cases the primary affection was acute articular rheumatism, and in one the ankylosis was the result of acute infective osteomyelitis. In the fourth case, the nature of the primary affection could not be clearly made out, but there is no doubt, Oberst states, that it was some acute infective process. In two cases the suppuration caused by the breaking down of adhesions—in one in the cuticle, in the other in the knee—did not extend beyond the affected joint, whilst in the other two it was very extensive, and caused much disorganisation, necessitating amputation of the thigh in one of these instances, and causing death in the other. In the last case, which was one of ankylosis of the knee and deformity after acute rheumatism, forcible extension of the limb caused infraction of the inferior epiphysis of the femur, and was rapidly followed by acute and typical osteo-myelitis, with necrosis and formation of multiple abscesses in the medulla. Oberst thinks that the multiplicity of the abscesses, the character of the necrosis, and other morbid conditions in this case indicated that it was one of specific infective and not of simple septic osteo-myelitis, and it is suggested that it might have been due to the action of the poison of acute rheumatism. There can be no doubt, it is held, that in each of these four cases the suppuration set up by relatively slight force may be most readily explained by the supposition that, from the date of the primary acute affection during disease, germs had been left in the affected regions, and that, by the attempt to restore the functions of the joint, they had again been rendered mobile and placed under conditions favourable to the restoration of more active vitality. In each case, the patient at the time of operation was quite healthy—except with regard to articular deformity—and free from fever, and in not a single instance did any abscess or fistula exist at this stage. There could not, it is stated, have been any infection from without, as the integument in each case was quite intact, and the extravasation of blood caused by the forcible movements of the joint did not reach the surface. These cases, Oberst points out, should teach surgeons that they ought to be very cautious in attempting to break down ankyloses which have resulted from acute infective diseases. In cases of this kind, a cutting operation would certainly be less dangerous than forcible rupture of the adhesions by simple manipulation. In not one of the very numerous cutting operations that have been performed with orthopædic aims at the Oberst Hospital at Halle, has any instance been observed, Oberst states, of complication due to infection. It is supposed that the micro-organisms remaining after the primary disease find a much less favourable soil in the disinfected and antiseptically treated operation-wound, than in contused and lacerated tissues and in abundant or diffused extravasations of blood, conditions which often exist after forcible attempts to restore the functions of an ankylosed joint.

4394. *Thomson on Comminuted Fracture of the Head of the Tibia.*—Mr. William Thomson, of the Richmond Surgical Hospital, Dublin, has had reprinted from the *Transactions of the Academy of Medicine in Ireland* a case of that very rare form of fracture of the head of the tibia which is produced by crushing, the force being the weight of the trunk and upper extremities, delivered through the condyles of the femur upon the articular surface of the tibia with such violence as to comminute it. This injury, which has received but very little notice in the best and most recent surgical writings, is not less destructive than that caused by some great external crushing violence applied directly, so as to break either the femur or tibia, or both bones, into fragments at their junction one with the other. To attain a fracture of the head of the tibia *par écrasement*, it is necessary, Mr. Thomson points out, that the person should fall from a sufficient height upon the feet, thus allowing the following weight of the body to come with great force upon the tibial head, when further downward progress is suddenly stopped by contact of the foot with the ground. The case reported by Mr. Thomson was one of compound fracture of the tibia, the lower fragment having pierced the skin at the junction of the upper and middle thirds of the leg. The patient, who weighed about sixteen stone, stated that he had been standing on a board supported between two ladders, when it toppled, and he fell to the ground on his feet, afterwards striking with his left leg the iron frame of a bedstead, which was close at hand. The patient died from blood-poisoning about a week after his admission, and, on *post mortem* examination, two fractures through the shaft of the tibia were found, one about the junction of the lower and middle thirds, the other at the junction of the upper and middle thirds. The middle third of the bone lay as a loose fragment, and evidently its upper sharp end had acted as a wedge, and had split the head of the tibia into two principal fragments, the chief dividing line passing just to the left of the spine. On examining the upper articular surface, it was found that the left fragment comprised nearly the whole facet on that side, and was depressed about an eighth of an inch below the general surface. On the right side, the line of fracture began at the margin, about an inch from the central anterior point, passed obliquely backwards and to the left behind the spine, and terminated at the other fracture. Besides these fractures, there was considerable comminution of the head of the tibia, which was broken up into five fragments. The lines of fracture observed on the articular surface of the tibia were continued downwards into the head of the bone. This injury, Mr. Thomson states, is one of special interest, both because of the mode in which it was produced, and because of its character. Very little attention, it is thought, has hitherto been directed to injuries of the head of the tibia. This case is the tenth that has been recorded; but the injury, it is believed, occurs more frequently than is generally supposed.

4395. *Winslow on Pyloric Stenosis.*—The following summary is given at the conclusion of a statistical review of the operative measures devised for the relief of pyloric stenosis, contributed by Prof. Randolph Winslow, of Baltimore, to the *American Journal of the Medical Sciences*, April 1885. '1. In cancer of the stomach not producing stenosis, give anodynes in quantities sufficient to relieve distress, and do not operate. 2. Pylorectomy for carcinoma is followed by a mortality of 76 per cent.; hence, it should only be very exceptionally performed—in those cases where, with marked stenosis, the pylorus is not adherent to the neighbouring organs, and the patient is young and fairly strong. 3. In other cases of carcinomatous stenosis, as only very temporary benefit can be obtained, perform gastro-enterostomy. 4. In cicatricial stenosis perform digital divulsion, but, if this be impossible, owing to great thickening of the walls, resection in those who are well nourished, and gastro-enterostomy in the debilitated, may both be followed by good results. 5. In the opinion of Prof. Winslow, hæmorrhage or perforation from ulcer or other cause than stenosis does not present indications for pylorectomy. 6. Duodenostomy, gastrostomy for the passage of a tube, and complete gastrectomy, should all be replaced by gastro-enterostomy.' W. Johnson Smith.

MEDICINE.

RECENT PAPERS.

4396. Bristowe.—The Consequences of Long-continued Constipation. (*Brit. Med. Jour.*, May, p. 1085.)

4397. Phillips.—A Case of Sporadic Cretinism. (*Lancet*, May, p. 799.)

4398. Tytler.—The Postural Method of Treating Dilatation of the Stomach. (*Brit. Med. Jour.*, May, p. 1041.)

4399. Farrell, Easmon J.—The Nature and Treatment of 'Blackwater Fever.' Printed for the Government of the Gold Coast Colony. London: 1884.

Art. 4396. *Bristowe on the Consequences of Long-continued Constipation.*—In the *Brit. Med. Jour.*, May 1885, p. 1085, Dr. Bristowe contributes notes illustrating the consequences of long-continued constipation. One case was that of a married lady, aged 30, who had suffered for many years from persistent constipation. About a week before Dr. Bristowe saw her, she began to suffer from abdominal pain, with sickness, and disturbance of the bowels; and, on examination, a tumour was detected. This the author at first considered to be a movable kidney, but a week later the tumour had moved lower down, and then it was decided that the mass must be fæcal. During the next three months this mass moved almost down to Poupart's ligament, and became flattened like a penny bun, at the same time becoming softer and more doughy. The patient was treated with enemata and purgatives, but they did not succeed in dispersing the tumour. The further history is not recorded, as the author lost sight of the patient. The second case was that of a woman, aged 46, who had suffered for many years from irregularity of the bowels, and at times with looseness and discharge of mucus. Long-continued constipation caused dilatation of the lower half of the large intestine, producing thickness and sluggishness of its walls, so that the fæces lagged behind, and lumps became impacted, as in the previous case. The offensive discharge was supposed to be due to the mucous membrane having become excoriated in different parts, from the long-continued irritation produced by the impacted fæces. Another case related is that of a little girl, aged 8, who was admitted into hospital with a history of long-continued constipation. The abdomen was large and tense, the body generally emaciated; she was supposed to be suffering from abdominal tuberculosis. Opening medicines were given and enemata employed, but no actual fæcal matter was evacuated. Three weeks after admission the child died. The *post mortem* examination revealed enormous distension of the large intestine, which was filled with thick, semi-solid, olive-green-coloured fæces. These were more solid in the rectum than elsewhere, and, immediately above the anus, formed an indurated conical lump. The upper part of the rectum was dilated to within two inches from the anus. But there was no stricture here or elsewhere. Between the cæcum and the rectum there were about half a dozen large tracts of ulceration, scattered at long and unequal distances from one another. Each occupied an area of from four to eight square inches. Two more cases are cited, showing how habitual constipation causes hypertrophy and dilatation of the colon. The importance of not allowing constipation to be neglected is insisted upon, together with the necessity of emptying the rectum by mechanical means, when there has been constipation of long standing, not readily yielding to medicines.

4397. *Phillips on a Case of Sporadic Cretinism.*—In the *Lancet*, May 1885, p. 799, a case is reported, exhibited by Dr. Sidney Phillips at a meeting of the Clinical Society of London. The patient, aged 10½ years, came under the author's care at St. Mary's

Hospital. The family history was good, but two months previously to the birth her mother received a severe fright. Labour was natural, and nothing abnormal was noticed until the infant was nine months old. When first seen by Dr. Phillips, the child was ten years old, weighed 2 st. 7lb., and was 2 ft. 7¾ in. high. There were large masses of fatty tissue above the clavicles, the thyroid body was absent, the voice croaking, the hair scanty, the head very large, and the anterior fontanelle unclosed. There was marked lordosis, and the child, though able to walk, was unsteady on the legs. She was childish in intellect, but good-tempered; her mental condition was mainly remarkable for extreme torpidity and hebetude. The limbs and face were œdematous, but firm; they pitted on firm pressure, but the pitting disappeared more quickly than in cases of dropsy. The hands were spade-like, the feet short and square, the limbs very much enlarged, and the tongue also enlarged. It was pointed out that, besides other signs of cretinism, there was present a condition much allied to, if not identical with, the disease known as myxœdema. Dr. Phillips has collected notes of ten cases of a similar nature which have been recorded by various authors, and of these it appears that six presented signs, more or less marked, of an œdematous state. Kocher, it is stated, has produced cretinism in human beings by removing the thyroid gland, and Mr. Horsley has found myxœdema develop in monkeys after ablation of the gland. The cause of the absence of the thyroid body in the present case was not evident, but in ten of the reported cases there was a history of fright during pregnancy in three.

4398. *Tytler on Postural Method of Treating Dilatation of the Stomach.*—In the *Brit. Med. Jour.*, May 1885, p. 1041, Dr. P. Tytler records the case of a woman who suffered from excessive dilatation of the stomach, producing attacks of vomiting every two or three days. The author tried various remedies to give relief, but none succeeded, until he made the patient lie on her back for two hours after every meal, with a small pillow placed below the buttocks, and kept her on a diet of milk and beef-tea. The vomiting attacks soon ceased, and after a time the patient went about as usual, wearing a tight abdominal belt, and continuing the postural treatment. In the course of a few months her health was completely restored. The *rationale* of this treatment is obvious. Owing to the relaxed and flabby condition of the walls of the overdistended stomach, the food, by its weight, caused a bulging below the level of the pylorus. When the lower end of the abdomen was elevated, the contents of the stomach were brought on a level with the pylorus, and thus they passed on in the natural way.

RICHARD NEALE, M.D.

4399. *Farrell on the Nature and Treatment of 'Blackwater Fever.'*—We are indebted to French naval surgeons for almost all we know of this particular form of fever, which they describe under various names—*e.g.*, *Fièvre bilieuse melanurique*, *F. pernicieuse ictérique*, *F. bilieuse nephrorrhagique*, *F. icterodes remittens*, &c. English writers on the diseases of tropical climates are singularly silent on the subject. Dr. Farrell, acting colonial surgeon of the Gold Coast Colony, whose pamphlet is printed for the Government of the colony, gives a very good account of this fever, with cases and temperature charts. He strongly maintains its paludal or malarial origin. The peculiar clinical features of the fever are, that it only attacks those already deteriorated in health. It is very often preceded by simple attacks of intermittent fever, with progressive anæmia and sallowness. The onset is invariably sudden. The quality of the vomit and urine is peculiar. The jaundice is uniformly distributed, not in patches of varying degrees of intensity; it is seen from the very first onset of the disease, and varies with the general condition. The type of accompanying fever is remittent or intermittent, even in the worst cases. The appearance of the face is dejected; the conjunctiva is yellow, but not injected. There is tenderness of the gastro-hepatic region. The pulse follows the fever. It is not contagious. In all these respects it differs from yellow fever. The urine gives no reaction of bile; but, on the contrary, the spectrum of hæmoglobin. Microscopy shows a few altered blood-corpuscles, amorphous granules, a few epithelial casts, triple phosphates, and acid urates. Heat and nitric acid give a variable proportion of albumen. Sodium chloride and acetic acid show the characteristic crystals of hæmatin. The prognosis is necessarily grave. As regards treatment, the author recommends large doses of quinine, calomel at the onset, and occasionally afterwards, in doses of from ten to twenty grains, not only for its action on the liver and as a sedative to the stomach, but an antiseptic, which may serve to minimise the self-infection which is apt to occur in fevers of this kind. G. D'ARCY ADAMS, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

4400. MACDONALD —Nitrite of Amyl an Eliminator of Uric Acid. (*Brit. Med. Jour.*, May, p. 1039.)

4401. WALKER.—Chloroform or Ether. (*Lancet.*)

4402. MASTERMAN.—On Carbuncle. (*Brit. Med. Jour.*, June.)

4403. SHOEMAKER.—The Hypodermic Injection of Oil. (*Boston Med. and Surg. Jour.*, and *Brit. Med. Jour.*, June, p. 1257.)

4404. LATHAM.—Why does Salicylic Acid Cure Rheumatism? (*Lancet*, June, pp. 1119, 1158.)

4405. JAMES.—A new Method of Administering Pepsin. (*Brit. Med. Jour.*, May, p. 986.)

4406. ILLINGWORTH.—A Remedy for Gout. (*Brit. Med. Jour.*, May, p. 1095.)

4407. BLACK.—The Action of Digitalis as a Depressor-Motor. (*Lancet*, May, p. 886.)

4408. QVISLING.—The Elastic Bandage in Cholelithiasis. (*Tidsskrift for prakt. Medicin*; and *Nord. Medicin Arkiv*, Band xvi., Häft. 4.)

4409. REINHARD.—Treatment of Diphtheritic Paralysis by Strychnia. (*Deutsche Med. Wochensch.*, May 7.)

4410 Treatment of Diphtheria by the Faradic Current. (*Centralbl. für die Gesammte Therapie*, May.)

4411. Ankylostoma Duodenale Treated by Doliarin. (*Centralbl. für Klin. Med.*, April 18.)

4412. DRAGENDORFF, G., PROF.—Analysis of Various Sorts of Brazilian Coffee. (*Farmatzevtitchesky Jürnal*, No. 8, 1885, pp. 115–122.)

4413. ROSENBLUM.—On Tincture of Iodine in Intermittent Fever. (*Proceedings of the Kaluga Medical Society*, 1884, p. 40–41.)

4414. TRILESSKY, A. K.—On the Anæsthetic Action of Cucain. (*Vratch*, 1885, No. 18, pp. 287-88.)

4415. TRUSEWICZ, JAKOV J.—On the Treatment of Asiatic Cholera, and on the Intravenous Injection of Liquor Ammoniæ, instead of Saline Solutions, in Cholera Patients. (*Russkaia Meditzine*, No. 8, 1885, pp. 157–158.)

4416. **Lourie, S.**—Biological and Therapeutic Action of Convallaria Majalis. (*La Medicina Contemp.*, March, April, and May 1885.)

4417. **Fubini.**—Inhalations of Blood. (*La Medicina Contemp.*, April 1885.)

4418. **Verardini, F.**—Large Doses of Ipecacuanha in Acute Pneumonia. (*Annali Universali di Medicina*, March 1885.)

4419. **Dujardin-Beaumetz.**—A Case of Vaginismus Successfully Treated with Hydrochlorate of Cucain. (*L'Osservatore*, No. 53, 1884.)

4420. **Rusconi.**—Hydrochlorate of Cucain in Gynæcology. (*Gazzetta degli Ospitali*, No. 1, 1885.)

Art. 4400. *Macdonald on Nitrite of Amyl as an Eliminator of Uric Acid.*—In the *Brit. Med. Jour.*, May, p. 1039, Dr. A. D. Macdonald states the following facts relating to the use of nitrite of amyl. The author was called to a case of puerperal eclampsia. For 3½ hours, he gave the patient repeated inhalations of nitrite of amyl. In the course of the following 18 hours, one minim of nitro-glycerine solution of 1 per cent. was given four times. About 31½ hours after the first inhalation, the urine was drawn off, and, on allowing it to stand, it was seen to deposit crystals of uric acid. Next, the author made a check experiment, giving an adult, with normal urine, exactly the same number of inhalations and doses as he had given the previous patient; it was then found that the urine also deposited large quantities of crystals of uric acid. After this, the author gave inhalations of 4 minims of nitrite of amyl, every two hours, to a patient suffering from a severe attack of gout. Large quantities of uric acid were passed after these inhalations, the patient making a very rapid recovery. Dr. Macdonald is inclined, from these observations, to place nitrite of amyl in the list of drugs useful in gout.

4401. *Walker on Chloroform* v. *Ether.*—In the *Lancet* during the past year much has been written upon the above subject, each writer upholding his favourite anæsthetic; and that the comparative safety of the two agents has long been and still is a vexed question, a reference to sect. 434 : 2 of the *Medical Digest* will strikingly show. Mr. Walker, by a series of tables, appears to establish his point of contention that chloroform is the better agent. In 10,000 administrations of chloroform, Mr. Walker has had but one fatal case, and that occurred in a woman who had been drinking heavily for a fortnight previously.

4402. *Masterman on Carbuncle.*—In the *Brit. Med. Jour.*, June 1885, p. 1246, Mr. G. F. Masterman warns practitioners against the use of stimulants in the treatment of carbuncle, having found even the very moderate use of wine greatly add to the severity of the symptoms, and that perchloride of iron, milk, eggs, and beef-tea, with free use of caustics, yielded most satisfactory results.

4403. *Shoemaker on the Hypodermic Use of Oil.*—The favourable results obtained if olive and cod-liver oils be injected subcutaneously are detailed in the *Brit. Med. Jour.*, June 1885, p. 1257, in an abstract of a paper read before the American Medical Association by Dr. Shoemaker (*Boston Med. and Surg. Jour.*, May 7). In cases where patients have refused all food, or where, as in gastric ulcer, food could not be given by the stomach, Dr. Shoemaker and others have injected half-ounce, and even ounce doses of the oils into the loose cellular tissue of the buttocks, shoulders, arms, &c., causing but little inconvenience locally, and producing most satisfactory results generally.

4404. *Latham on the Action of Salicylic Acid in Rheumatism.*—In the *Lancet*, June 1885, pp. 1119, 1158, Dr. P. W. Latham enters fully into this question, and gives elaborate chemical tables showing the changes that take place after the ingestion of this drug. Without attempting to reproduce the formulæ proving these changes, it will suffice to state that salicylic acid is changed into salicyluric acid, and thus hinders the formation of uric acid in the system. That salicylic acid, properly administered, does cure rheumatism and prevent cardiac complications, if given early enough, is an admitted fact, and the conditions which in acute cases ensure success are the following. 1. Pure salicylic acid must be given, the acid prepared from winter green only. 2. It must be uncombined with any base. One hundred grains of the acid mixed with fifteen grains of green acacia in powder and a little mucilage, and allowed to stand, harden, and are readily made into 30 pills. 3. Six pills, equal to a scruple of the acid, must be given thrice at intervals of an hour; and, if the head be not affected, a fourth dose must be given, it being essential to saturate the system, until buzzing in the ears be produced. Afterwards, a scruple is repeated every four hours, if it can be borne. Usually 80 to 100 grains are sufficient, but some patients require 140 to 150 grains. 4. Forty to eighty grains are to be given daily for ten days, after all pain and pyrexia have passed away. 5. A strictly milk and farinaceous diet is to be enjoined. 6. The bowels are to be daily opened by 3 to 5 grains of calomel at bedtime, with a saline draught in the morning. This is most essential. 7. The bed should have light blankets, sufficient to keep the patient from feeling cold, as the object of treatment is to cool, not to sweat the body.

4405. *James on a new Method of Administering Pepsin.*—In the *Brit. Med. Jour.*, May 1885, p. 986, Dr. Prosser James advocates the administration of pepsin in the form of a condiment. Messrs. Savory & Moore now supply a 'peptic salt,' which is a compound of pepsin and salt, so prepared that it will retain the properties of pepsin for an unlimited time. Ten grains will dissolve nearly 200 grains of hard-boiled albumen, or two ounces of lean cooked meat.

4406. *Illingworth on a Remedy for Gout.*—In the *Brit. Med. Jour.*, May 1885, p. 1095, Dr. C. R. Illingworth recommends the following prescription in the treatment of gout. ℞ sol. hydrargyri bichloridi (B.P.) ʒvj.; potassii iodidi ʒss.; inf. quassiæ vel calumbæ ad ℥vj. Half an ounce to be taken every two or three hours. The author states that, when congestion or actual inflammation, not only of the kidney, but of other internal organs, exists, this medicine should not be prescribed.

4407. *Black on the Action of Digitalis as a Depressor-Motor.*—In the *Lancet*, May 1885, p. 886, Dr. Gordon Black contributes a most instructive article, illustrating the action of digitalis as a depressor-motor in cases of exhaustion of the inhibitory centres. The author narrates the case of a lady who was subject to attacks of violent hysterical mania, due to complete retroversion and flexion of the uterus. For a time, these attacks were prevented by placing the uterus into an upright position whenever it happened to fall out of place. One night, however, Dr. Black was called to see his patient, and found her in one of her attacks. On examining the uterus, it was found to be in perfect position, but there was a history of a recent chill, and subsequent sudden stoppage of the menses. At 5 P.M. the author prescribed one drachm of the tincture of digitalis to be given every hour. After four or five doses the patient was perfectly calm and reasonable; the pulse, which had been 130, was now 90, full and strong. The patient slept soundly, and next morning awoke refreshed and well. The author points out the value of digitalis as an alternative to agents such as chloral, bromide of potassium, nitrite of amyl, &c., all of which tend to weaken the heart and to arrest it in diastole, whereas digitalis stops the heart in systole. Richard Neale, M.D.

4408. *Qvisling on the Treatment of Gall-Stone by the Elastic Bandage.*—Dr. Qvisling states (*Tidskrift for prakt. Medicin,* quoted in *Nordiskt Medicinískt Arkiv,* Band xvi. Häft 4) that in seven cases of gall-stone (two men and five women) he has seen good results follow the use of Martin's elastic bandage. Its action depends on the immobilisation of the abdominal organs, by which the calculus is prevented from irritating the mucous membrane, and from causing reflex contractions of the muscular coat of the gall-bladder. The bandage is applied rather firmly over the upper edge of the hepatic dulness, as far down as the crest of the ilium, a piece of flannel being placed under it. It may be removed at night, if desired by the patient. Its use should be persisted in until the patient appears to be definitely cured. A. Henry, M.D.

4409. *Reinhard on Strychnia in Diphtheritic Paralysis.*—In the *Deutsche Med. Wochensch.* of May 7, Dr. Reinhard, of Bautzen, relates a case for the purpose of recommending the use of strychnia in diphtheritic paralysis. A boy aged 3½, after an attack of diphtheria, suffered from symptoms of paralysis in various muscles of the body, his gait being uncertain and staggering, at the same time that the soft palate was affected. Tonic treatment, including iron, was of no avail, and twelve days later the symptoms had advanced so far that death seemed imminent from paralysis of the respiratory muscles, and the child's body hung limp over the arm when he was held up. Internal remedies were useless, as the power of swallowing was lost; recourse was therefore at once had to the subcutaneous injection of sulphate of strychnia, 1 milligramme (0·015 grain) daily. The very next day the breathing was quieter and the muscles were less flaccid, and only fifteen doses were required to establish convalescence on a firm basis. No undesirable symptoms were set up by the strychnia. Dr. Reinhard mentions this case, not as anything new, but as bringing an old remedy to the remembrance of his fellow-practitioners.

4410. *Treatment of Diphtheria by the Faradic Current.*—The *Centralbl. für die Gesammte Therapie* for May mentions another remedy for diphtheria, in the form of the faradic current. This is to be applied with one electrode on the nape of the neck, and the other on the front of the throat, both being well moistened. The current should be strong enough to be felt in the throat, but not so as to cause too much movement. It should be applied from two to four times a day; improvement may be looked for after the first application, and the throat is soon clear of the membrane. The electrodes must be thoroughly disinfected after each application. The results are said to be better than those of gargling or brushing out the throat.

4411. *Ankylostoma Duodenale Treated by Doliarin.*—In the *Centralbl. für Klin. Med.* for April 18 a case of ankylostoma in the duodenum, treated by doliarin, is quoted from the *Korrespondenz-blatt für Schweizer Aerzte* of Jan. 1. An Italian, aged 39, who had worked for two years in the Gothard tunnel, was received into a hospital in Upper Alsace suffering from phthisis, and excessively anæmic. Ova of the ankylostoma were found abundantly in the fæces, and the administration of doliarin, in doses of 3 or 4 grammes (46 to 60 grains) daily, brought away a great number of the parasites. After death, which occurred in about two months, the duodenum was found free from the parasites, but a large number were found in the jejunum and ileum. Very few ova had been found in the fæces for some time previous to death, showing that they cannot be taken as a measure of the number of the parasites in the intestine. The feeble condition of the patient had prevented the administration of the remedy for a sufficiently long time to ensure their complete expulsion. Alice Ker, M.D.

4412. *Dragendorff on Brazilian Coffee.*—Professor G. Dragendorff, of Dorpat, conjointly with his pupils, Messrs. K. Bening, R. Schmidt, N. Weber, E. Andrzejewski, and G. Papier, analysed (*Farmatzevtitchesky Jürnal,* No. 8, 1885, p. 115) fifteen sorts of Brazilian coffee (after the methods described in the author's work on *Analyse von Pflanzen und Pflanzentheilen,* 1882, Goettingen), and reached the conclusion that, as a food-substance, it may be safely placed on a level with the best sorts of Mocha, Java, Ceylon, and other coffees. The average figures representing the constitution of the article are given thus. Moisture, 11·16 per cent. (max. 12·72, min. 8·66); ashes, 3·54 per cent. (max. 4·24, min. 2·92); phosphoric acid, 0·402 per cent. (max. 0·490, min. 0·280); nitrogen (the whole amount), 4·14 per cent. (max. 4·46, min. 3·63); albuminous bodies, 22·95 per cent. (max. 24·78, min. 19·86); caffeine, 1·09 per cent. (max. 1·22, min. 0·99); fatty oil, 13·50 per cent. (max. 16·48, min. 12·50); tannic acid, 6·50 per cent. (max. 7·60, min. 5·46); cellulose, 11·59 per cent. (max. 8·68, min. 13·03). The largest amounts of caffeine were found in 'Lavado Moka Superior' (1·22 per cent.), 'Moka brasileiro verde' (1·20 per cent.), and 'Velho especial' (1·19 per cent.); the lowest in 'Café Velho especial' (0·99 per cent.), and 'Lavado especial' (1·00 per cent.).

4413. *Rosenblum on Tincture of Iodine in Intermittent Fever.*—In a communication to the Kaluga Medical Society, Dr. Rosenblum, of Likhvin, states (*Proceedings of the Kaluga Medical Society,* 1884, p. 40) that he most successfully treats all forms of malarial fever by the administration of tincture of iodine, which produces cure, even in inveterate cases, where quinine, iron, and arsenic have proved ineffective. To attain good results, however, the use of comparatively large doses of iodine is absolutely necessary. The author gives half a drachm of the tincture daily in three ounces of water, with a few grains of iodide of potassium.

4414. *Trilessky on the Anæsthetic and Antispasmodic Action of Cucain.*—In the *Vratch,* No. 18, 1885, p. 287, Dr. A. K. Trilessky writes that he successfully resorted to the pain-relieving action of cucain in numerous cases of serous iritis, orbital periostitis, fracture of the neck of the femur, enteralgia, pleurodynia, megrim, and toothache. The local application of the drug (in solution or powder) in toothache invariably brought relief for from four to eight hours; as to tooth-drawing, the operation under cucain was as painful as without it. In three cases of megrim associated with general hyperæsthesia of the eyeball, the instillation of a 3·5 per cent. solution of cucain into the conjunctival sac rapidly and completely removed pain, first in the eye and its neighbourhood, then in the temple, then in the parietal region, and lastly in the occiput. No relief of intense pain ensued in a case of inflammation of the large bowel, in which a hypodermic injection of a quarter of a grain of cucain had been made. Dr. Trilessky states that cucain possesses a considerable antispasmodic property. In support of this, he details a series of observations. One was that of a priest's wife, aged 38, in whom, during labour, there appeared painful clonic contractions, at first of the uterine cervix, and then (in the last stage of the labour) of the uterine fundus, as well as of the lower limbs. Two hypodermic injections of half a grain of hydrochlorate of cucain, made on both sides at the umbilical level, arrested contractions and pain for thirty-six hours, when they reappeared, but again at once yielded to two other subcutaneous injections of cucain. The internal administration of morphia had remained quite inactive. Another lady for three successive days and nights had suffered from most obstinate nausea and vomiting (of unknown origin), in spite of the use of ice, chloral, morphia, valerian, bromides, &c. A hypodermic injection of a quarter of a grain of cucain into the epigastric region instantly arrested sickness, and in ten minutes the patient fell asleep and slept soundly for the whole night. On the next morning slight nausea returned, but after a few ten-drop doses of a solution of one grain of cucain in one drachm of water, permanent recovery followed. The same solution was administered internally with fairly good results to a third patient, suffering from vomiting of pregnancy (vomiting ceased, but nausea, though in far slighter degree, remained). In a fourth case, half a grain of cucain was injected hypodermically in the first stage of labour in a multipara suffering from agonising uterine pain, and convulsions in the lower limbs. Both the pain and convulsions at once disappeared, the labour being over in forty minutes after the cucain injection. The uterine contractions after the latter became quite painless, except the moment of the fœtal head passing through the perinæum.

4415. *Trusewicz on Intravenous Injections of Liquor Ammoniæ in Cholera.*—In the *Russkaia Meditzina*, No. 8, 1885, p. 157, Dr. Jakov J. Trusewicz, of Cronstadt, recommends a trial of the intravenous injection of liquor ammoniæ (about three or four fluid pounds of water, containing from five to twenty drops of liquor ammoniæ to every six ounces) in the collapse and algide period of Asiatic cholera. The transfusion of the ammoniated water in cholera would satisfy two indications; first, 'it would augment the mass of the blood and neutralise an anomalous reaction of the latter;' and, secondly, 'being the best of all known analeptic means, liquor ammoniæ would stimulate the cardiac action.' [*See* Dr. Trusewicz's article in the LONDON MEDICAL RECORD, Feb. 1885, p. 69. The author mentions three new instances illustrating the most powerful stimulating virtue of the hypodermic injection of five or seven drops of liquor ammoniæ in cases of apparently hopeless collapse. In one of the cases, the injection revived a patient with enteric fever after musk and other usual stimulants had utterly failed. In another case, in that of phthisis in the last stage, the author found the patient pulseless, deadly pale, cyanotic and delirious, in cold clammy perspiration, with stertorous breathing, reactionless pupils, and involuntary defæcation. Two hypodermic injections, each of three drops of liquor ammoniæ, were made within twenty minutes; immediately after the second injection, the patient recovered consciousness, began to talk, and even joke, with his attendants, then fell asleep for five hours, and on the next morning heartily enjoyed his breakfast, as if nothing had happened.] The author advises also trial of the internal administration of liquor ammoniæ in cholera cases. In certain cases irritant baths of ammoniated water might prove of service. Dr. Trusewicz suggests, also, to give a trial to inhalations of oxygen as well as to systematic massage of the whole body, after Weir-Mitchell's plan. V. IDELSON, M.D.

4416. *Lourie on the Biological and Therapeutic Action of Convallaria Majalis.*—Like other observers, Lourie found the action of the various preparations of convallaria very uncertain. In some cases the action was marked, in others it failed altogether. He remarks, however, that when convallaria failed, digitalis given afterwards failed also. When convallaria failed to do good, it, on the other hand, never did harm. It never caused a fall in the blood-pressure; when there was any change, it was one of augmentation. The pulse and respiration, if influenced, are diminished in frequency. Diuresis increased or unaltered. The doses given ascended to as much as 4 grammes daily of the extract, and of convallarina and of convallamarina to 50 centigrammes and to 1 gramme daily. Diarrhœa occasionally resulted. In conclusion, he agrees with Professor Maragliano that convallaria, if not all that Sée said, is yet of value in diseases of the heart, and must be considered as one of the substitutes for digitalis, of which it has the advantage without its drawbacks and cumulative effects.

4417. *Fubini on Inhalations of Blood.*—Fubini recalls the experiments of Cl. Bernard on the power of absorption of the respiratory tract, and its great tolerance of foreign liquids; and, starting from this, he studies, in the sound man as well as in the sick, the possibility and therapeutic value of inhalations of defibrinated blood. Twenty parts of defibrinated ox-blood are mixed with eighty parts of water, and to this is added 75 per cent. of salt. This mixture is perfectly tolerated by the larynx, and, according to the author, the blood-corpuscles remain there unaltered for some time. With an ordinary atomiser (India-rubber ball) 100 grammes of this liquid can be respired in a short time. A quarter of an hour after the inhalation is finished, no change is to be noticed in the pulse, respiration, or temperature. Neither in the healthy or in the sick is cough provoked. By auscultation, the rapid disappearance of the liquid can be observed. The observations collected refer to cases of oligæmia, and especially to one severe case, in which the anæmia was caused by abundant and repeated epistaxis. In all the cases, the improvement produced by repeated inhalations was shown not only by the general condition, but by the increase of the red corpuscles as compared to the white, by the enumeration of the corpuscles, and by the richness in hæmoglobin.

4418. *Verardini on Large Doses of Ipecacuanha in Acute Pneumonia.*—Large doses of ipecacuanha in acute pneumonia were much given at the commencement of this century, its antiphlogistic and depressing action being empirically recognised. Trousseau, Péter, and other well-known physicians were aware of the good effect of these large doses. The author's own observations confirm the utility of this method of giving ipecacuanha. The dose ranges from 2 grammes (31 grains) to 4, 6, or even 8 grammes. These doses are well borne and rarely cause sickness; the tolerance of the drug is in relation with the gravity of the pneumonia. This may be caused by a paralysis of certain nerve-centres, as Finkler and Zunt have shown. The action of the ipecacuanha is to cause contraction of the blood-vessels and capillaries. Large doses of ipecacuanha have not the same effect as emetin; the first cause pulmonary ischæmia, while the second cause marked hyperæmia. G. D'ARCY ADAMS, M.D.

4419. *Dujardin-Beaumetz on Cucain in Vaginismus.*—Very severe vaginismus followed in a case of lingering labour, with retained placenta. For two years, connection was impossible, and forcible dilatation under anæsthetics proved unsuccessful. The inner aspect of the nymphæ and the orifice of the vagina were painted four times with a two-per-cent. solution of hydrochlorate of cucain. After this treatment, the speculum or the finger could be passed into the vagina without exciting pain or spasm. Before the application of the cucain, a firm muscular band [probably the anterior fibres of the levator ani. *Rep.*] could be felt under the vaginal mucous membrane, but after the local use of the drug it entirely disappeared.

4420. *Rusconi on Cucain in Gynæcology.*—Dr. Rusconi has employed cucain extensively in the wards of the Ospitale Maggiore, Milan. A two-per-cent. solution applied to an erosion of the cervix greatly relieved the pain caused by subsequent application of caustics. Dr. Rusconi prepared a solution of 20 centigrammes of hydrochlorate of cucain in 25 grammes of water, and soaked in it a tampon which he applied to the ulcerated surface of a cancerous cervix. The pains began to diminish in a minute and disappeared within ten; in about an hour and a half they began to return and reached their former intensity an hour later. On painting the labia and the orifice of the vagina with the solution, the parts became anæmic and anæsthetic, and the radiating lancinating pains ceased for a few minutes. A three-per-cent. alcoholic solution acted more quickly, and caused a transitory burning sensation with redness of the vaginal mucous membrane. The pains did not return so quickly. Dr. Rusconi, however, found that subcutaneous injections answered best in cases of uterine cancer. The most severe pains disappeared within six or seven minutes, and did not return till after an interval of over two hours. On frequent repetition of the injection, patients who had lost their appetite began to eat with avidity. Simultaneous injection of cucain and morphia increased these beneficial results; but, when atropia was similarly combined with cucain, the effects were not so satisfactory, the anæsthesia being less marked; and the poisonous action of the atropia appeared to be increased by its combination with cucain. Dr. Rusconi found that, in some women, cucain failed to produce any anæsthetic effect on the mucous membrane of the genitals, although it rapidly acted on the cornea in the same patients. ALBAN DORAN.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

4421. SCHATZ.—Pregnancy after Double Ovariotomy. (*Centralbl. für Gynäkologie*, 1885, No. 23.)

4422. SVANBERG.—Relief of Cramp of the Uterus during Parturition. (*Eira*; and *Deutsche Med. Wochensch.*, May 7.)

4423. TROIANOVA, FAÏNA.—On Partial Gangrene of the Womb after Labour. (*Vratch*, 1885, No. 18, p. 293.)

4424. PRUJANSKAIA, MARIA O.—A Case of Extra-uterine Pregnancy. (*Meditz. Obozr*, Fasc. vii., 1885, p. 689.)

4425. MIKHAILOVA, EKATERINA A.—On a Case of Catamenial Erysipelas. (*Meditz. Obozr.*, Fasc. vii., 1885, p. 693.)

4426. PASZKEWICZ, BRONISLAVA.—A Case of Retention of the Placenta. (*Meditz. Obozr.*, 1885, Fasc. vii., pp. 697-700.)

4427. IRWIN.—The Influence of Sea-voyaging upon the Genital Functions in Women. (*New York Med. Jour.*, May 9.)

ART. 4421. *Schatz on Pregnancy after Double Ovariotomy.*—Prof. Schatz, of Rostock, in the *Centralbl. für Gynäkologie*, June 6, speaks of a recent paper by Schröder, describing six ovariotomies where the sound part of the ovary had been purposely left behind. Five recovered, but pregnancy had not occurred since the operation in any of them. Schatz, on the other hand, has successfully removed two ovarian cysts, leaving the healthy tissue of both ovaries, pregnancy following the operation. The patient was a single woman, aged 20. On Feb. 20, 1880, Dr. Schatz performed ovariotomy. A large cystic tumour of the left ovary was removed, including the outer third of the Fallopian tube and all the ovarian tissue that could be found. The right ovary was of the size of a walnut, and showed signs of cystic degeneration. It was ligatured by means of three silk threads passed between it and the broad ligament, and cut away in such a manner that a piece of ovarian tissue, at the most but two millimètres broad, was left on the proximal side of the ligature. The right tube remained intact. During recovery, an abscess formed in the track of a suture in the abdominal wound. On March 21, when the period was due, the patient was seized with a paroxysm of pain in the right side of the hypogastrium and right thigh, with vomiting and high fever for four days. The symptoms recurred on April 8, and again on May 8, when the pain extended to the left hypogastrium. No deposit could be detected in the pelvis. The first 'show' appeared on May 9; it lasted three days, and was pale and scanty. It recurred on May 31. In the interval, attacks of pain occurred in the left inguinal region. On June 11 a swelling, of the size of a plum, was detected behind and to the left of the uterus, which was strongly anteflexed. On June 28 severe sacral pains set in, radiated to the left inguinal region, and disappeared at the period, which was copious, and lasted for six days. On July 15 the uterus was found to be small and retroverted. Henceforward the catamenia appeared regularly up to the patient's marriage in April 1884. At the beginning of August the last period was seen before pregnancy, the symptoms of which became marked in September. On May 12, 1885, labour set in; it lasted for thirty-six hours, and the forceps was employed. The right ovary had been preserved, and the cut surface was examined; it was found to be undoubted ovarian tissue, containing Graafian follicles. The tumour of the left ovary was also subjected to fresh examination, and it was found that the entire organ had been removed. [This remarkable case throws a light on the nature of pain proceeding from ovarian disturbance, for the pain described in this case is rare after ordinary ovariotomy. It also proves the necessity of a very thorough removal of the ovaries when oöphorectomy is performed for the cure of bleeding myomata of the uterus. It is evident that the fimbriæ of the Fallopian tube can lie in contact with a mere trace of ovarian tissue, as well as with an entire ovary.] ALBAN DORAN.

4422. *Svanberg on Relief of Cramp of the Uterus during Labour.*—The *Deutsche Med. Wochensch.*, of May 7, quotes from the *Eira*, No. 17, 1884, a method adopted by Dr. Svanberg for relieving cramp of the uterus during parturition. He employs a compress, soaked in a mixture of chloroform and olive-oil, of each equal parts, or two parts of chloroform to one of oil, applied closely to the abdomen, between the umbilicus and the symphysis pubis. He has found the result to be immediate relief of the spasm, even when the previous inhalation of chloroform has failed. ALICE KER, M.D.

4423. *Troianova on a Case of Partial Gangrene of the Womb after Labour.*—Dr. Faïna Troianova, of St. Petersburg (*Vratch*, No. 18, 1885), reports a case of puerperal gangrene of the uterus, which came under observation in Professor A. N. Lebedeff's clinic. The patient, a peasant, aged 21, went through her first delivery quite normally. On the third day after the labour there appeared high fever (40° C.), associated with tenderness of the womb, dulness on percussion in the hygogastrium, and vomiting. The symptoms continued unabated till the thirteenth day, when a 'fleshy body' was expelled from the uterus. From that day the patient's state began to improve; the improvement, however, being temporarily disturbed by pelvic suppuration with discharge of pus through the bladder. On microscopic examination, the 'fleshy body' was found to be a dead piece of the uterine wall. Both around and within the vessels swarms of micro-organisms were present. According to Dr. Troianova, gangrene was caused by mycotic thrombosis, with subsequent disturbance in the local circulation.

4424. *Prujanskaia on Elytrotomy in Extra-uterine Pregnancy.*—In the *Meditz. Obozr.*, Fasc. vii., 1885, p. 689, Dr. Maria O. Prujanskaia, of Moscow, reports the case of a patient, aged 29, who had been twice delivered at full term, the last time six years ago. She had aborted in August 1884, and ceased again to menstruate in November, when nausea, vomiting, and swelling of the breasts appeared. In the beginning of December, when putting on her boots, she was suddenly seized with severe abdominal pain, which was soon followed by giddiness, dyspnœa, sickness, attacks of fainting, and muco-sanguinolent vaginal discharge. Similar attacks recurred in the middle of December, and in the beginning and middle of January 1885. The author, who had been called to the patient in the course of the fourth attack, found the womb slightly enlarged, softened, and patulous; its fundus was somewhat deviated to the right by a firm, elastic, indistinctly fluctuating tumour which was situated in the left side of the pelvis, and could be felt through the left roof of the vagina. Various usual signs of pregnancy being present, the author diagnosed extra-uterine fœtation of about three months' duration; peritonitic symptoms with prostration were taken as a sign of partial rupture of the superficial layers of the fœtal sac, accompanied with hæmorrhage into the peritoneal cavity. The author proposed to the patient and her friends to arrest the development of the fœtus by injections of morphia into the sac, or by electricity. The proposals being rejected, an expectant treatment (rest, opium, champagne, wine, &c.) was resorted to. By the end of January, fœtal movements could be distinctly felt through the abdominal walls of the emaciated patient. About the middle of February, a fifth attack of acute peritonitic symptoms occurred, the patient's state now growing too dangerously worse to excuse any further waste of time. Professor Snegireff, consulted by the author, diagnosed pregnancy in the left Fallopian tube at the point of rupture, and urged the necessity of immediate operation. Accordingly, he performed elytrotomy by Paquelin's thermo-cautery. An incision into the roof of the vagina, about three fingers' breadth in length, proved sufficient to allow easy podalic extraction of the live fœtus (of about four and a half months). The umbilical cord was tied and divided, the placenta left *in situ*. The cavity of the sac and the vagina were washed out by a solution of corrosive sublimate, and then filled up with iodoform gauze. The operation was almost bloodless (the uterine artery had been tied immediately after the incision) and lasted only ten minutes. Death ensued in the night after the operation. No *post mortem* examination was allowed.

4425. *Mikhailova on a Case of Catamenial Erysipelas.*—In the *Meditz. Obozr.*, Fasc. vii., 1885, p. 693, Dr. Ekaterina A. Mikhailova, of Moscow, records the case of a general servant, a widow, aged 28, who was admitted to the Staro-Ekaterinensky Hospital during an attack of facial erysipelas, on the fourth day of which the catamenia (in due term) commenced. According to the patient's statement, from her tenth year she had very often suffered from profuse nasal bleeding. She had begun to menstruate regularly at 17, and henceforward the nasal hæmorrhage had coincided with the menstrual periods. In course of time, erysipelas ceased to appear; but instead of it there began to occur, at every catamenial (or rather præmenstrual) period, swelling and redness of the face, headache, giddiness, fever, and general weakness, all of which symptoms invariably disappeared with the end of the menstrual discharge, and were followed by desquamation of the affected parts. Of late, these curious erysipelatous attacks rather increased in intensity. On examination, the author found retroversion of the womb, all the other organs being healthy. After six days' stay, the patient left the hospital in the course of the usual desquamation, but otherwise being and feeling quite well. Dr. Mikhailova mentions several other similar cases which she was able to find in literature (three cases of Wagner, two of Greletty, one case of Joseph, one of Pauli, one of Castallat, one of Piaz), and points out that 'the essence of connection' between menstruation and erysipelas remains as yet unknown. Still she is inclined to think that a certain morbid state of the sexual system may serve as a predisposing moment to the occurrence of erysipelatous attacks (Joseph's patient suffered from dysmenorrhœa, Greletty's from amenorrhœa, Pauli's from parametritis; Mikhailova's had retroversion uteri, &c.). [In the *Centralbl. für Gynäkologie*, No. 52, 1884, p. 827, Dr. Roehring, of Bamberg, describes another typical case of the affection in a spinster, aged 30, in whom he personally watched attacks of menstrual erysipelas more than a dozen of times. The patient being, or pretending to be, a *virgo intacta*, positively refused to undergo any gynæcological examination. Dr. A. Godot, in his

Thèse de Paris, 1883, describes twelve cases of the kind (partly from his own practice, partly from literature), and reaches the conclusion that there exist two forms of so-called catamenial erysipelas: true erysipelas, and pseudo-erysipelatous œdema of the integuments. Like Dr. Mikhailova, he thinks that the first variety has its predisposing cause in anomalies of menstruation, &c.; the second form is dependent upon 'general vascular and nervous disturbances.'—*Rep.*]

4426. *Paszkewicz on a Case of Retention of the Placenta.*—In the *Meditz. Obozr.*, 1885, Fasc. vii., p. 697, Dr. Bronislava Paszkewicz, of Piatigorsk, Tersky Government, reports the case of a weak anæmic peasant woman, aged 35, to whom she was called three days after the patient's sixth labour (at full term) to remove the retained placenta, persistent efforts by a midwife having proved entirely ineffectual. The author found the patient lying in bed soaked through with blood and discharge, in a semi-conscious state, complaining of agonising thirst and sleeplessness, suffering from nausea and muco-bilious vomiting, severe rigors, and fever (40°·1 C.). The pulse was weak and small, 120; the belly tense, extremely painful and tender; the fundus of the womb was felt at three finger-breadths above the navel. There were present considerable rupture of the perinæum, several lacerations of the mucous membrane and submucous layer of the vagina, and one-sided deep laceration of the uterine cervix. The placenta was found firmly adherent along its whole circumference to the uterine wall. It was removed piecemeal in six pieces by the fingers alone, the removal proving extremely difficult and prolonged, in consequence both of firm adhesion and the state of the patient, who repeatedly fainted during the operation, and constantly required much attention. Extraction of every piece was accompanied by free discharge of thick pus, the placental parenchyma being in a state of purulent infiltration. The uterine (or external) surface of the borders of the placenta was densely covered with villous or bristle-shaped excrescences of connective tissue, which undoubtedly pointed to an inflammatory origin of the adhesion. The improvement of the patient's state was immediate and striking. It remained steady, even in spite of a recto-vaginal fistula being produced eight days later by a clumsy midwife, who had employed for administering enemata an old-fashioned syringe with a tin nozzle. V. IDELSON, M.D.

4427. *Irwin on the Influence of Sea-voyaging on the Genital Functions in Women.*—At a recent meeting of the Medical Society of the County of New York, Dr. J. A. Irwin read a paper on this subject, based principally upon observation during several years that he had acted as a ship-surgeon. During his service at sea not fewer than 15,000 persons had come under his care. Among this number of passengers there were 104 pregnancies, 11 parturitions, 3 miscarriages, and 451 menstruations or missed periods in women among whom the function was usually normal. Of the 451 observations upon the menstrual periods of women at sea, 288 were made under his instructions by a stewardess, and, being replies received to formal questions, he thought they could be relied upon as accurate. All of the 288 women were supposed not to be pregnant; menstruation was normal previously to the voyage in all; 21 of them passed the period while on board without menstruating; 43 menstruated before the period; 224 menstruated at the proper period; 23 complained of unusual pain, and in a few instances there was increased or diminished flow, while 201 of the women noticed absolutely nothing unusual which could be attributed to the voyage. Of Dr. Irwin's own 163 observations among women of a higher social standing, 13 passed the period on board without menstruating, of whom 11 experienced more or less molimen; 51 menstruated before the period, and 99 at the period. Of these, 47 complained of unusual discomfort, accompanied in thirty-seven cases with increased and prolonged flow, and in two with diminished discharge. Of the thirteen who passed the period, three were still on board at the following period; one of the three then menstruated almost normally, in one the result was not known, and in the other the flow was increased in quantity and prolonged in duration. But she subsequently experienced complete amenorrhœa during two periods. Dr. Irwin thought it was evident there was during a sea-voyage a tendency to increased pelvic congestion, which would offer an explanation for the phenomena usually observed regarding the menstrual function. As to the special conditions in an ocean voyage which might be supposed to exercise an influence upon the female habit, they might be classed under three heads; psychical influences, dependent upon the novelty of the situation and the apprehension of danger; second, aerial, consisting in some special quality of sea-atmosphere; and, third, motional, as a direct result of the movement of the vessel. With regard to periodicity, the most constant change was a premature return of the flow, and this return might take place at any time during the intermenstrual epoch. If a woman went on a voyage shortly after the cessation of the flow, there would be liability to a renewal of the discharge or of the peculiar symptoms attending a period, and it might lead to suppressed menstruation at the next time it should come on. Complete and passive amenorrhœa for one or more periods was a frequent after-result of the transatlantic voyage. Of the effects of a sea-voyage upon menstruation, none was more constant or unfortunate than an aggravation of whatever discomfort was ordinarily associated with that process. An ocean-voyage should be regarded as a potent emmenagogue, having a well-marked tonic, alterative, and sedative influence. But it should no longer be prescribed empirically, but with a definite object in view. There were many cases in which it would be indicated; for instance, in certain conditions of chloro-anæmia, amenorrhœa with pain, and retarded sexual maturity, certain forms of leucorrhœa and uterine hysteria, and lack of development. The influence of sea-voyaging upon gestation was important. It was the author's opinion that pregnancy, especially during the latter months, predisposed and aggravated the most distressing features of seasickness.

PATHOLOGY.

RECENT PAPERS.

4428. LÜTKEMÜLLER.—A Case of Complete Congenital Cardiac Malformation surviving Forty-six Years. (*Wiener Med. Blätter*, No. 20.)

4429. BOND.—A Case of Acute Hydrocele: Pleurisy and Pericarditis. (*Lancet*, April, p. 748.)

4430. DICKSON.—A Case of Parasitic Disease of the Stomach. (*Practitioner*, April 1885.)

4431. Price.—A Case of Bone in the Testis and Epididymis. (*Brit. Med. Jour.*, April, p. 739.)

4432. Bamberger.—Traumatic Tubercular Pleuritis. (*Med. Times and Gazette*, January, p. 62.)

4433. Money.—The Experimental Production of Chorea and other Results of Capillary Embolism. (*Brit. Med. Jour.*, May, p. 1097.)

4434. Cutter.—Malformed Spermatozoa. (*Gaillard's Med. Jour.*, May.)

4435. De Giovanni, Prof.—On some Particulars concerning Peritoneal Cancer and Tuberculosis. (*Atti del R. Istituto Venete*, Tom. ii., serie 6.)

4436. Settier, A.—Contagion of Tuberculosis by the Genito-urinary Organs. (*El Siglo Medico*, May 3, 1885.)

4437. Cantani.—A Case of Carcinoma of the Cerebellum with Pulmonary Scirrhus. (*Il Morgagni*, No. viii., 1884, and *Annali Univ. di Med.*, Feb. 1885.)

4438. Chiari.—Contributions to the Knowledge of Accessory Suprarenal Capsules in Man. (*Zeitschrift für Heilkunde*, Band v., Heft 6.)

4439. Malassez, Vignal, and Nocard.—Zoogloeic Tuberculosis.

4440. Münchmeyer.—Congenital Absence of One Lung. (*Deutsche Med. Wochensch.*, April 21.)

4441. Shaposhnikoff, J.—On a Case of Enormous Renal Stones. (*Proceedings of the Odessa Medical Society*, No. 8, 1884, pp. 99-100.)

Art. 4428. *Lütkemüller on a Case of Congenital Cardiac Malformation surviving Forty-six Years.*—Dr. Lütkemüller reports (*Wiener Med. Blätter*, No. 20) a case of a man, aged 46, who died after three months of palpitation and increasing cyanosis. *Post mortem* examination showed insufficiency of the mitral and tricuspid valves, and extreme constriction of the pulmonary with patency of the foramen ovale. If these conditions were congenital, as we may assume the patent foramen, and with it, probably, the stenosis of the pulmonary orifice to have been, it is remarkable that the man should have lived to such an age.

E. F. Willoughby, M.B.

4429. *Bond on a Case of Acute Hydrocele: Pleurisy and Pericarditis.*—In the *Lancet*, April 1885, p. 748, Mr. C. J. Bond records the case of a man, a hedge-cutter, aged 65, who suddenly felt pain in the right tunica vaginalis whilst at work; this was followed in a few hours by rapid swelling. Two days later he complained of pain in his chest, causing shortness of breath; and three days afterwards the patient was admitted into the Leicester Infirmary, with loud friction-sounds over both sides of the chest, and consolidation of the lower part of the left lung. The right tunica vaginalis was distended with fluid, and very tender, but no enlargement of the testicle could be detected. The patient died in three days from pneumonia and rapid pericarditis. At the necropsy both pleuræ were found covered with recent lymph, but contained little fluid. The left lung was consolidated at the lower part. The pericardium contained two ounces of semi-turbid serum; and both surfaces were covered with recent lymph. The right tunica vaginalis contained about two ounces of clear serum, and the surfaces were coated with a layer of recent lymph, but the testicle was not altered in any way. All the other organs, as well as the other serous membranes, were healthy. Mr. Bond remarks that this case is unique as far as he can ascertain, for there seems to have been a general inflammation of the serous membranes of the body, in which the tunica vaginalis took a part. Moreover, the author states that he detected the round organisms described by Friedländer as characteristic of pneumonia, not only in the pneumonic lung, but also in the pleural fluid and in that of the hydrocele. The author thinks that the presence of these organisms suggests the inflammation of the tunica vaginalis to have had a common cause with the general inflammation of the other serous membranes. There was no evidence of any septic poisoning, the patient having never any rigors, and the temperature always remaining high, as in ordinary pneumonia.

4430. *Dickson on a Case of Parasitic Disease of the Stomach.*—In the *Practitioner*, April 1885, Mr. G. C. Dickson relates a case in which there were present, in the stomach, parasites belonging to the schizomycetes. The patient was a dairymaid, aged 21. She was strong and healthy until April 1884, when she first complained of abdominal pain, accompanied with fever. From this time she was always ailing, and constantly vomiting, at length becoming so weak that she could not rise from bed; the pulse was small and quick, and she had a thin anæmic appearance. The vomiting came on at various times, the quantity vomited being sometimes as much as three pints. It was like pea-soup, being yellow, and with a deposit forming about one-third of the whole. In November 1884, Mr. Dickson made a microscopic examination, and discovered a number of numerous rod-shaped bodies, which were at once recognised to be bacilli, and the following facts were noted about them. 1. Their length averaged 1½ times the diameter of a red blood-corpuscle; several were longer, and were evidently formed by the union of several segments. 2. They were cylindrical or rod-shaped, with apparently square-cut ends. No flagellum was visible by a power of 800. They were motionless. 3. Spores were seen inside the bacilli, giving some of them an annulose appearance, some also separate. 4. They stained readily with Bismarck-brown, gentian violet, and methyl-aniline; less so with eosine, not with iodine. No sarcinæ or torulæ were observed. The treatment adopted was to give 15 grains of sulphocarbolate of sodium after each attack of vomiting. This produced immense relief, the vomiting became less frequent, and the bacilli less numerous. In a few days the vomiting ceased, and the patient rapidly improved in health, losing all gastric symptoms. With reference to the source of the bacilli, the author can only conjecture that they had their origin in some of the organisms naturally existing in other parts of the alimentary tract in small numbers, and that under certain conditions, favourable to their reproduction, they had multiplied in the cavity of the stomach.

4431. *Price on a Case of Bone in the Testis and Epididymis.*—In the *Brit. Med. Jour.*, April 1885, p. 739, is a report of a case by Dr. P. Price. A man, aged between 50 and 60, was admitted into hospital in a semi-unconscious state, and soon died. The necropsy showed cirrhosis of the liver, granular kidney, cystitis, and two strictures of the urethra. In the testis and epididymis on one side was a bony mass. Dr. Price thought the formation of bone was the result of old orchitis and epididymitis, and was not of a dermoid origin. The specimen was exhibited at the Pathological Society.

4432. *Bamberger on Traumatic Tubercular Pleuritis.*—In the *Med. Times and Gazette*, January, 1885, p. 62, an account is given of a case of isolated tubercular disease of one pleura, which presents features of considerable interest in relation to the pathogenesis of tubercle. The case occurred in the practice of Professor von Bamberger, of Vienna. A man, aged 43, was struck on the left side of the thorax by a wheel. The injury was followed by severe pleuritis, and progressed unfavourably. Paracentesis was delayed on account of the patient's obstinacy, until too late, and he died about one month after the injury. At the autopsy there was found extensive effusion into the left pleural cavity, the walls of which were lined by a thick false membrane studded with small nodules of tubercle. The left lung was completely compressed, but no tubercles could be discovered within it, nor in any other organ of the body. By the microscope, the nodules in the thickened pleura were found to contain numerous bacilli, undistinguishable in form and character from those described by Koch.

4433. *Money on the Experimental Production of Chorea and other Results of Capillary Embolism.*—In the *Brit. Med. Jour.*, May 1885, p. 1097, an analysis is given of some experiments made by Dr. Angel Money on rabbits, guinea-pigs, cats, and dogs. Particles of arrowroot, granules of potato-starch, and carmine, were injected into various animals, generally into the common carotid artery. Sometimes the injection was made towards the brain, but, as a rule, the liquid was injected towards the heart. It was exceedingly easy to produce embolism of the capillaries of the brain, but it was very difficult to get emboli into the capillaries of the upper part of the spinal cord, without causing death by paralysis of respiration. The most important clinical observation which came out of the experiments, was the production of involuntary movements undistinguishable from those of chorea. There was no appreciable paralysis or spasm with these movements. The 'chorea' of the animals experimented upon was always the result of embolism of the capillaries of the spinal cord, and never resulted from capillary embolism of the brain. The author does not consider that these experiments can upset the reasons given for locating the lesion of most cases of chorea in the human subject in the brain, the animals experimented upon being far removed from man. The want of development of the pyramidal tracts in the animals under consideration, possibly explains the reason why chorea did not in them result from embolism of the brain proper.

4434. *Cutter on Malformed Spermatozoa.*—In *Gaillard's Medical Journal* for May, Dr. Ephraim Cutter has contributed a paper on the 'Variations in the Form of Human Spermatozoa.' In 1861, Dr. G. H. Salisbury figured two-headed and three-headed spermatozoa; and now Dr. Cutter gives figures similar to these, observed by himself, as well as others, two-tailed and three-tailed. It is suggested that congenital deformities may depend upon these monstrosities of the sperm, a double-headed monster being the offspring of a two-headed spermatozoon.

Richard Neale, M.D.

4435. *De Giovanni on some Particulars concerning Peritoneal Cancer and Tuberculosis.*—Thomeyer, of Prague, says that in cases where it is doubtful whether we have to deal with free ascites, or with tuberculosis, or cancer of the peritoneum, percussion may help us to form a diagnosis; in cancer and tuberculosis of the peritoneum, percussion gives a clear sound on the right side, dulness on the left. This depends on the fact that, the mesentery being inserted on the lumbar column a little obliquely to the right, when it is affected by these morbid processes, it forces the intestine over to the right side. According to De Giovanni, this is not an universal rule. In a case of chronic tubercular peritonitis, the line of dulness was the same as that due to ascites from hepatic cirrhosis. Only later, after paracentesis on the left side, there was produced a sacculated peritonitis, which gave the dulness on percussion as mentioned by Thomeyer. He also narrates a case of neoplastic peritonitis, in which the limit of dulness was that of free ascites. This case also presented a remarkable misplacement of the transverse colon, which lay in an oblique line ascending from right to left, reaching the epigastric region, where it occupied all the region ordinarily filled by the stomach, and grazing the liver with its upper border; the coils of the small intestine were collected to the left of the abdominal cavity. The stomach was very small, its surface shrunken, without ulcerations. He also gives a case of tuberculosis of the peritoneum, secondary to tuberculosis of the mesentery and prevertebral glands. In this case the intestines were all collected to the left, and conglobated into a voluminous mass, which simulated a tumour, over which there was dull tympanic resonance. There was no trace of ascites.

4436. *Settier on Contagion of Tuberculosis by the Genito-Urinary Organs.*—Dr. Settier narrates five cases, in which the contagion of tuberculosis was probably communicated by the genito-urinary organs. The first, a man 38 years of age, with no family history of phthisis, contracted a disease of the prostate after marriage with a phthisical girl who had a constant leucorrhœal discharge, which discharge was found to contain numerous tubercle-bacilli. The pus from the man's urethra also contained unmistakable tubercle-bacilli. The second case was that of a healthy young man, aged 29, in whom, four years after marriage with a phthisical woman, there were swelling of the left testicle and epididymis, and enlarged prostate. The diagnosis was established by the recognition of tubercle-bacilli in pus from the urethra. Case 3 was that of a woman married to a phthisical man. After marriage she suffered from leucorrhœa, vulvo-vaginitis, and pelvi-peritonitis. When admitted, she was suffering from tuberculosis of the lungs, tongue, and ear. In case 4 a negress, whose husband died of phthisis, suffered from a vast tuberculous abscess of the pelvis, with commencing mischief at the apex of the right lung. In case 5, a man, aged 29, suffered from pulmonary and laryngeal phthisis. The right testicle, and especially the epididymis, was enlarged. This he attributed to an orchitis, which he had long before the chest was affected.

4437. *Cantani on a Case of Carcinoma of the Cerebellum with Scirrhus of the Lung.*—A woman, aged 45, had occipital headache, rigidity of the back of the neck, inco-ordination of movements, progressive loss of the mental faculties, vomiting, tendency to fall backwards, and frequently also slowness of the pulse and respiration. The emaciation, vomiting, and epigastric pains might have given rise to the suspicion of cancer of the stomach, but the symptoms generally were those of a lesion of the cerebral nervous system, and the diagnosis made was that of tumour of the cerebellum. At the necropsy a small abscess, limited to the cortical substance, was found in the right parietal lobe, in correspondence with the first parietal ascending convolution; in the right lobe of the cerebellum was an abscess, of the size of a walnut, and in the left lobe of the cerebellum another abscess, of the size of a filbert. In the upper lobe of the right lung there was a nodule of scirrhus as large as an apple. During life there were no other signs of pulmonary lesion, than raised percussion-note and prolonged respiration in the right superior lobe. The author supposes the abscesses were the result of suppuration from neoplastic foci of carcinomatous nature, developed in the brain, and that the pulmonary scirrhus was secondary.

G. D'Arcy Adams, M.D.

4438. *Chiari on Accessory Suprarenal Capsules.*—The author describes four cases under his own observation, and proves that accessory adrenals may be found in males as well as in females, and in adults as well as in children; they do not undergo atrophy in youth, and lie between the kidney and the testicle or ovary. In one case, a large tumour was removed by laparotomy from the abdomen of a man aged 44; it lay between the right kidney and the brim of the pelvis, upon the quadratus lumborum and iliacus internus muscles, external to the psoas, and behind the cæcum and the peritoneum covering the right iliac fossa. It was invested with a capsule intimately connected with neighbouring structures. Dr. Chiari looked upon the tumour as proceeding from an accessory adrenal, but consisting of irregularly arranged adrenal tissue, and therefore cancerous. In support of his opinion, he notes that it grew in a region where accessory adrenals are found, and possessed a complete capsule, as is only the case in growths of a similar consistence and rapid growth, when they originate within an organ that has a true capsule. Grawitz has described new growths developed from healthy accessory adrenals. The characters of sections of the tumour examined by Dr. Chiari resembled, microscopically, normal adrenal tissue. Groups of characteristic pigmented cells, infiltrated with fat, were found, precisely similar to those seen in the substance of the suprarenal capsule. The tumour recurred, its substance bursting its capsule and invading neighbouring organs.

Alban Doran.

4439. *Malassez, Vignal, and Nocard on Zooglœic Tuberculosis.*—In the yearly record of the work done at the histological laboratory of the Collège de France, MM. Malassez and Vignal chronicle a further progress in their researches on zooglœic tuberculosis. In their first communication on this subject they admitted that they had not discovered a staining fluid which coloured the zooglœic masses. They now publish the subjoined, which gives most satisfactory results. Ten parts of a 2 per cent. solution of sodium carbonate, five parts of distilled water saturated with aniline oil, three parts of absolute alcohol; methylene blue made with nine parts of distilled water, one part of a concentrated solution of methylene blue in alcohol at 90°. M. Nocard, professor at the veterinary school at Alfort, has detected in the viscera of fowls zooglœic masses, similar to those described by MM. Malassez and Vignal.

W. Vignal.

4440. *Münchmeyer on Congenital Absence of One Lung.*—The *Deutsche Med. Wochensch.* of April 30 contains an account of two cases of congenital absence of one lung, reported by Dr. Münchmeyer to the Medical Society of Lüneburg. The one was a healthy boy, aged 2 years, who was attacked with pneumonia on Feb. 8 of this year. The right side of the thorax was dull up to the sixth rib, with loud crepitation in the upper part. The left side sounded empty on percussion, and no breath-sounds could be heard; but the measurements of both sides of the chest were the same, and no difference could be perceived in the respiratory movements. Congenital absence of the left lung was diagnosed, and the diagnosis was verified by the necropsy which took place after the child's death on Feb. 21. The left thorax was then found entirely empty, with the exception of a small fleshy mass at its lower part. The chest-walls did not collapse on being incised, nor was there any foul smell in the contained air. In the second case, the malformation was not diagnosed during life. A well-grown healthy girl, aged 11, died, in the summer of 1850, of tubercular meningitis, after an illness of thirteen days' duration. On opening the chest in the course of the necropsy, the medical men engaged were astonished to find the left half of the thorax empty, with the exception of a fleshy mass, of the size of a small apple, situated behind the heart. In this case, as also in the former one, the heart and pericardium were quite normal. The family medical man stated that the girl had never suffered from any form of respiratory difficulty.

Alice Ker, M.D.

4441. *Shaposhnikoff on a Case of Enormous Renal Stones.*—At a meeting of the Odessa Medical Society, Dr. J. Shaposhnikoff exhibited (*Proceedings of the Odessa Medical Society*, No. 8, 1884) two renal calculi of unusually large size, which had been found by him in making the *post mortem* examination on the body of a patient, aged 35, who had died in collapse at the Jewish Hospital. The stone taken from the right kidney weighed 370 grammes (13 ounces) and measured 13 centimètres in length, 7 centimètres in breadth and 6 centimètres in thickness (in the thickest spot). The stone, taken from the left kidney, weighed 240 grammes (8½ ounces) and measured 11 centimètres in length, 6½ centimètres in breadth, and 4½ centimètres in thickness. The calculi consisted of crystalline phosphates and oxalates. Their surface was partly smooth, partly covered with large projections which gave the stones an appearance of a coral-tree. The concretions lay enclosed in sacs consisting of the thickened renal capsules lined with thin remnants of the cortical substance. The left kidney contained some pus. A part of the right calculi was broken off and lay free in the kidney. The ureters were narrowed and collapsed; the bladder was small, and contained very scanty urine mixed with blood and pus. The patient, from whom these remarkable specimens were taken, had been a strongly built labourer, a loader of grain in corn-lofts. He had been suffering from renal colic and ischuria for the last fifteen years of his life, being occasionally compelled to leave his occupation, but always only for a short time; and thus he had continued to do his hard work up to thirty-six hours from his death. He was brought to the hospital in collapse, with agonising renal pain, vomiting, vesical tenesmus, all of which symptoms had suddenly developed after an unusually prolonged spell of grain-loading. Anuria was present. On examination there were found in both of the lumbar regions very tender and very hard oval tumours; handling of the right swelling gave rise to a distinct crepitation, as if from rubbing two hard bodies against each other. Dr. Shaposhnikoff easily recognised the case as one of renal calculi, with probable traumatic fracture of the right stone. The author thinks that the renal calculi described above are the greatest on record (at least, the pathological museums of Berlin and Vienna contain nothing even approximately similar). Naturally, the author draws, also, attention to the striking fact that the patient was able to carry on his work almost up to his very death, notwithstanding the severe nature of his disease. [Dr. Gee has published a case of double nephrolithiasis, in which the calculous substance weighed 41 ounces. *See* Dr. R. Neale's *Medical Digest*, sect. 1022 : 2.—*Rep.*]

V. Idelson, M.D.

OTOLOGY.

RECENT PAPERS.

4442. Herzog, Joseph.—A Case of Tinnitus Aurium produced by Aneurysmal Dilatation of the Left Posterior Auricular Artery. (*Monatsschrift für Ohrenheilkunde*, Band xv., Nos. 8 and 9.)

4443. Weil.—Contribution to the Study of Noises in the Ear. (*Ibid.*, Band xv., No. 11.)

4444. Graf, F.—Desquamative Inflammation of the Auditory Canal. (*Ibid.*, No. 12.)

4445. Longhi, Giovanni.—Causes, Symptoms, and Treatment of Nervous Deafness. (*Ibid.*)

4446. Ellis, Richard.—Clinical Remarks on a Case of Menière's Disease, delivered at the Newcastle Throat and Ear Hospital, Jan. 28, 1885.

4447. Knapp, H.—On the Indications for Opening the Mastoid Process based on some Recent Observations. (*Trans. of the American Otological Society*, July 1884.)—Lippincott, J. A.—A Case of Mastoiditis Interna Chronica with Sclerosis. Trephining : Recovery. (*Ibid.*)

4448. Buck, Albert H.—Large Doses of Potassium or Sodium Iodide in Sudden Deafness of Supposed Syphilitic Origin. (*Ibid.*)

4449. Vermyne, J. J. B.—Disease of the Ethmoid, the Consequence of Chronic Catarrh of the Naso-pharynx ; Exophthalmos. (*Ibid.*)

4450. Burnett, Chas. H.—Reflex Aural Phenomena from Naso-pharyngeal Catarrh ; Objective Noises in and from the Ear. (*Ibid.*)

4451. Vermyne, J. J. B.—Myxofibroma at the Basis Cranii, causing Blindness and Seven Years later Deafness by Destruction of the Labyrinth. (*Ibid.*)—Kipp, Charles J.—Tumours of the Auricle. (*Ibid.*)

4452. Howe, Lucien.—Case of Hæmatoma Auris in a Sane Person Treated with Injections of Ergot. (*Ibid.*)

4453. Seely, W. W.—Jequirity Treatment of Suppurative Otitis Media. (*Ibid.*)

4454. Spencer, H. N.—A Contribution to the Mechanics of Naso-pharyngeal Practice. (*Ibid.*)

4455. Todd, Chas. A.—Necrosis of the Right Labyrinth ; Total Facial Paralysis on the same Side ; Partial Recovery. (*Ibid.*)

4456. Clarke, F. D.—Training the Hearing of Deaf-Mutes. (*Ibid.*)

4457. Sexton, Samuel.—Sarcoma of the Concha and Deformities of the Auricle. (*Ibid.*)

4458. Sexton, Samuel.—Influence of Dental Irritation in Diseases of the Ear. (*Ibid.*)

4459. Sexton, Samuel.—The Employment of Peroxide of Hydrogen in the Treatment of Purulent Inflammation of the Ear. (*Ibid.*)

4460. Jones.—On Politzerisation. (*Brit. Med. Jour.*, May, p. 850.)

4461. Burton.—A Foreign Body in the Ear : Expulsion through the Nose. (*Lancet*, April, p. 641.)

4462. Connor.—Mumps as a Cause of Sudden Deafness. (*American Jour. of Med. Sciences*, October.)

4463. Sexton.—On Treatment of Acute Catarrhal Inflammation of the Middle Ear. (*Lancet*, Oct. 1884, p. 677.)

4464. Hewetson.—The Treatment of Acute Earache. (*Lancet*, April, p. 703.)

4465. Würkner.—The Treatment of Otorrhœa. (*Lyon Méd.*, 1885, No. 9.)

4442. *Herzog on Tinnitus produced by Aneurysm of the Posterior Auricular Artery.*—Dr. Joseph Herzog (*Monatsschr. für Ohrenh.*, Band xv., Nos. 8 and 9) relates the case of a lady, aged 71, with atheromatous disease of the blood-vessels, in whom he observed above the left mastoid process a somewhat elastic, red, tender spot about the size of a kreuzer. Pulsation synchronous with the pulse could be felt at this point, and a blowing sound heard with the stethoscope. The patient experienced a violent hammering sound. The left ear, after removal of wax, was normal. Numerous other symptoms led the author to think that other small aneurysmal dilatations of the arteries might be present, *e.g.* in the cerebral vessels.

4443. *Weil on Tinnitus Aurium.*—Dr. Weil (*Monatsschr. für Ohrenh.*, Band xv., No. 11) again draws attention to the effect which blowing on the walls of the meatus and on the auricle often has in arresting noise in the ear. The application of different substances, such as chloroform, ether, electricity, has, he finds, a similar action. He lays down the proposition that 'noises which can be arrested by blowing are vascular noises (Blutgeräusche).' The effect of the blowing is, he supposes, to produce a reflex irritation of the vaso-motor nerves of the ear.

4444. *Graf on Desquamative Inflammation of the Auditory Canal.*—This is a case (*Monatsschr. für Ohrenh.*, Band xv., No. 12) of occlusion of the auditory canal with masses of epidermis complicated with violent pain, perforation of the membrane, and mastoid periostitis. Recovery followed Wilde's incision and after removal of the epidermis.

4445. *Longhi on Nervous Deafness.*—Dr. Giovanni Longhi recommends, after the patient's general health has been built up as much as possible, the use of the vapour of acetic ether blown into the middle ears. Good results may also be expected from leeching behind the ear, setons, blisters, purgatives, and preparations of quinine. The latter are of advantage in vertiginous cases. Lastly, electrisation of the acoustic nerve is mentioned.

4446. *Ellis on Menière's Disease.*—This is a demonstration of a case of sudden Menière's disease with the usual symptoms occurring in a man aged 39, who had previously suffered from catarrh of the left ear. Hearing, as tested with Hughes's audiometer, was entirely absent. A large tuning-fork G was only faintly heard. The supposed cause was exposure, as a postman, to great heat. The treatment consisted of iodide and bromide of potassium, with chloride of ammonium and a vegetable tonic. No counterirritant was used.

4447. *Knapp and Lippincott on Trephining the Mastoid Process.*—Dr. Knapp describes three cases in which this operation was performed. In the two first, it was done for acute and chronic tympano-mastoiditis respectively, and in them the opening liberated puriform discharge. In the third case the operation was performed for sclerosing mastoiditis, with intact non-congested membrana tympani, and constant, severe, intractable headache. There was moderate and uniform swelling of the mastoid integument. No pus was expected or found. At a depth of 2 centimètres, the cells were entered and proved highly vascular. Complete recovery ensued. Dr. Lippincott's case, the subject of which was a girl, aged 19, is very similar to the last described. The mastoid, though not appreciably swollen, was sensitive to pressure and tapping, and the hearing failed gradually. The mastoid was drilled to a depth of 17 millimètres, but unmistakable mastoid cells were not encountered. The pain disappeared and the hearing gradually improved. Dr. Knapp employs chisels smaller than those described by authors for opening the mastoid.

4448. *Buck on Large Doses of Potassium or Sodium Iodide in Syphilitic Deafness.*—The result of the treatment of five cases of sudden deafness due apparently to syphilis, but unaccompanied by any easily recognisable syphilitic lesions, is given by the author. The iodides were administered in doses increasing up to from 270 to 525 grains daily, but in no case was anything accomplished worthy the name of improvement. The author attributes the deafness in these cases to the presence of a gumma having produced irreparable damage in the labyrinth.

4449. *Vermyne and Kipp on Disease of the Ethmoid Bone producing Exophthalmos.*—Dr. Vermyne's patient, a young lady, aged 16, presented herself with projection of the right eyeball, which was distinctly pushed forward and slightly outward. There was chronic catarrh of naso-pharynx, especially of the right side, with constant muco-purulent or purulent discharge. A tumour, of the size of half a hazelnut, was found extending from the upper inner edge of the orbit to a little below the ligamentum canthi internum, gradually sloping backward as far as the finger could reach. It was of bony hardness, immovable, and connected with the os planum of the ethmoid bone. Examination showed that the patient breathed freely through both sides of the nose, and no polypi could be discovered. Under the internal administration of iodide of potassium, and the local use of potassium iodide and tincture of iodine to the nasal cavities, the catarrh diminished, and the patient thought the eye became less prominent, but this was uncertain. She had for a long time suffered from slight diplopia on opening her eyes in the morning, which would disappear after a few seconds. [The description of this case is deficient, inasmuch as there is no report of the condition of the middle turbinated body and neighbouring parts on the affected side, and the connection between the nasal catarrh and the orbital tumour, though probable, was not clearly shown.—*Rep.*] Dr. Kipp, in the discussion following the previous case, related two instances of abscesses in this region, producing projections into the orbital cavity and giving rise to exophthalmos. In the first case, in attempting to remove it, a considerable quantity of pus escaped, both from the tumour and from the nose. The patient died of pneumonia, and examination showed that the frontal sinus, the ethmoidal cells, and the sphenoidal sinus of that side, constituted an immense cavity filled with pus. In the second case, there was a tumour of the size of a hickory nut, immovably attached to the inner upper angle of the orbit. The nose showed nothing abnormal, but great swelling and congestion of the mucous membrane. One day, whilst pressing the tumour, it was felt to diminish in size, and at the same time the patient expectorated exceedingly offensive matter. Shortly after, similar matter escaped from the nose. The three cases are of much interest.

4450. *Burnett on Objective Noises in the Ear.*—Two cases of objective 'clicking' noises in the ear, caused, in the author's opinion, by catarrh of the nose and pharynx, and relieved by treatment of this condition, are related. In the first case, the author attributed the noise to spasm of the upper fibres of the superior constrictor of the pharynx. In the second case, to clonic spasm of the pterygoid muscles, chiefly on the left side. With each clicking sound the lower jaw was both seen and felt to move, chiefly toward the right side.

4452. *Howe on Hæmatoma Auris.*—In a case of four years' duration, occurring in the concha of a sane person, considerable benefit was derived from repeated subcutaneous injections of from two to five minims of liquid extract of ergot.

4453. *Seely on Jequirity in Suppurative Otitis Media.*—The author has for a year used jequirity for bringing about thinning of the mucous membrane, 'with a fair proportion of good results.' A saturated solution is introduced by means of a probe and cotton, or a few drops are poured in. There always results a profuse discharge, and sometimes a good deal of pain. In only one case was there excessive reaction for one or two nights. No further treatment beyond keeping the ear clean is employed. No details of cases are given.

4454. *Spencer on the Mechanics of Naso-pharyngeal Practice.*—Slight modifications of the ordinary anterior nasal spray apparatus are described. For acute ear-ache in children the author has used with benefit, externally, the application of dry heat, and to the nostrils a spray of nitrate of silver (grains ij. or iij. to the ounce).

4456. *Clarke on the Training of Deaf-Mutes.*—Professor F. D. Clarke, of the New York Institute for Deaf-Mutes, in submitting to the American Otological Society certain questions on this subject, stated that, by substituting for the battery and contact breaker in a Hughes's audiometer a magneto-electric machine, they had obtained a convenient method of testing the hearing, the instrument being at once simple, compact, and durable. In the ensuing discussion he also stated, in regard to the bell-test, that nine-tenths of the deaf-mutes would *feel* a bell if rung in the room. The author's questions, which are of great practical importance, were referred to a committee of three, whose report will be awaited with interest.

4457. *Sexton on Peroxide of Hydrogen in the Treatment of Purulent Inflammation of the Middle Ear.*—Dr. Sexton has employed this drug in both acute and chronic cases with very satisfactory results. He uses the ordinary fifteen-volume solution, either diluted or pure (the latter in chronic cases only), applied with absorbent wool, or a few drops distilled into the ear. After remaining a minute or more, the ear should be dried with cotton-wool. E. Cresswell Baber, M.B.

4460. *Jones on Politzerisation.*—Dr. Macnaughton Jones, in the *Brit. Med. Jour.*, May 1884, p. 850, contributes a few remarks on Politzerisation, and a new form of Politzer's bag for auto-inflation of the tympanum with respired air. Having practised every proposed modification of Politzer's plan, both as regards appliance and mode of application, the author finds that the plain bag, with a piece of tubing attached to the pipe, gives the best practical results; and that in manner of application, either the swallowing of a little water, or the nasal pronunciation of the vowel *a*, assists most satisfactorily the inflation. When inserting the nozzle, it must be directed in a horizontal direction towards the Eustachian tube, and not towards the frontal sinus, as damage is likely to be done to the delicate ethmoidal cells. Drawings are given of a bag for auto-inflation of respired air, or for the inflation of chloride of ammonia vapour, also of a bag with double nasal piece and reservoir for respired air. These instruments are made by Mr. Kerr, of Messrs. Godfrey & Cook, Conduit Street, London. A few hints are given to aid those who adopt Politzer's methods; the chief are these. 1. Let the patient be seated. 2. Incline the head to one side, and try inflation through either nostril; do this for both ears. 3. Direct the current as horizontally as possible. 4. Ascertain whether any form of nasal phonation, or the act of deglutition, best dilates the aperture. 5. If phonation, compress during the pronunciation; if deglutition, observe the elevation of the larynx, and compress the bag just at the commencement of its ascent. Attention is also drawn to a galvaniser for the tubal muscles of the Eustachian orifice, made by Hawksley, of Oxford Street, a drawing of which is given.

4461. *Burton on a Foreign Body in the Ear: Expulsion through the Nose.*—Dr. Burton, in the *Lancet*, April 1884, p. 641, records the case of a farmer who got a grass-seed into his left ear. It resisted all attempts to extract it. He was put under chloroform, and the ear was syringed out frequently and forcibly with tepid water. On examination with the ear-speculum, there was no appearance of any foreign body, but the membrana tympani was absent. The cause of the trouble being thought to be removed, the patient was sent home. Forty-eight hours afterwards a large portion of the grass-seed was discharged from the left nostril, the seed having evidently worked its way through the Eustachian tube. [In the *Medical Digest*, sect. 1793 : 5, a case is noted where an oat-seed passed from the throat through the Eustachian tube into the external auditory meatus.—*Rep.*]

4462. *Connor on Mumps as a Cause of Sudden Deafness.*—In the *American Journal of Medical Sciences*, Oct. 1884, Dr. Connor relates a case of deafness caused by an attack of mumps. From abstracts of thirty-one cases, he arrives at the following conclusions. 1. Mumps does in some rare cases produce complete deafness. 2. It is usually attended with all the evidences of disease of the labyrinth. 3. It sometimes begins in the cochlea, but more frequently in the circular canals. 4. Owing to the lack of early observations and treatment, it is impossible to say that it is not transmitted through the middle ear from the parotids to the labyrinth. 5. The history of some of the cases would seem to suggest that such an origin was possible, and that every case of deafness during mumps ought to be carefully watched. Thus, if the middle ear be affected, we might hope that revulsive and counter-irritant treatment would arrest the disease, and save the labyrinth. 6. As to treatment of the disease of the labyrinth, nothing has thus far been devised that has produced any satisfactory result. [Mr. Dalby in 1877 directed attention to the relationship of deafness and mumps, vide *Medical Digest*, sect. 813 : 1, and also LONDON MEDICAL RECORD, 1882, p. 290.—*Rep.*]

4463. *Sexton on the Treatment of Acute Catarrhal Inflammation of the Middle Ear.*—Dr. Sexton, in the *Lancet*, October 1884, p. 677, reports a case of acute catarrhal inflammation of the middle ear, which was cured by removal of the accumulated secretions from the tympanum through the Eustachian tube. A flexible Eustachian catheter, one-fourth of an inch in diameter, was introduced, through the inferior nasal passage, into the mouth of the Eustachian tube; a large metallic ear-syringe was then connected to the catheter by means of a stout piece of rubber tubing. Suction was thus established by using the syringe as in aspiration. After one or two exhaustive efforts had been made, the patient, a well-known medical man, experienced great relief. Half a dozen strokes of the piston were made, and the relief obtained was almost immediate and permanent.

4464. *Hewetson on the Treatment of Acute Earache.*—In the *Lancet*, April 1885, p. 703, Mr. B. Hewetson recommends the application of glycerine and carbolic acid in cases of acute earache. The author records the case of a boy, 5 years of age, who, within the previous three hours, had developed acute earache, with a high temperature. Mr. Hewetson injected a solution of glycerine and carbolic acid, with the result that the acute pain was almost instantly relieved. The next morning the boy was perfectly well. In cases of earache and catarrhal otitis, if thus applied, it invariably stops the pain, and the author does not hesitate to say that in many cases, where perforation seemed imminent, this accident has been avoided. The solution which answers best is the glycerinum acidi carbolici. If weaker solutions be used, they fail to produce good results, and stronger ones are too caustic. It is suggested that repeated trials should be made of this application to check otitis in scarlet-fever, as well as to relieve the earache in these cases.

RICHARD NEALE, M.D.

4465. *Würkner on the Treatment of Otorrhœa.*—In old cases of otorrhœa with profuse and fœtid discharge, the author recommends (*Lyon Méd.*, 1885, No. 9) irrigations with a 1 per cent. solution of perchloride of mercury in water. When the suppuration has become less abundant, he uses injections with alcohol, containing from half a grain to one grain of perchloride per ounce. He says he has succeeded in one-half of the cases treated in this manner. J. S. KESER, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

4466. MAGELSSEN.—A Case of Acquired Nystagmus. (*Norsk Magazin for Lægevidensk*: Band xxiii.; and *Nordiskt Med. Arkiv*, Band xv., Heft 4.)

4467. KOLTCHEVSKY, K. D.—On a Case of Disappearance of Trachoma under the Influence of Erysipelatous Process. (*Vratch*, No. 9, 1885, pp. 131-32.)

4468. KÏANITZYN, J.—On the Antiseptic Treatment of Contagious Conjunctivitis by Corrosive Sublimate. (*Voїnno-Meditzinsky Jürnal*, Nov. 1884, pp. 101-108.)

4469. SHTCHASTNYI, A. J.—On the Treatment of Graefe's Contagious Catarrh of the Conjunctiva, and of Blennorrhœal Conjunctivitis by Strong Solutions of Nitrate of Silver. (*Voenno-Sanitarnoie Delo*, No. 12, 1885, pp. 117-22.)

4470. SCHUCHARDT.—The Use of Chichm Seeds in Granular Ophthalmia. (*Der Fortschritt*, May 5, 1885.)

4471. BORDET. — On Jequirity. (*Der Fortschritt*, May 6.)

Art. 4466. *Magelssen on a Case of Acquired Nystagmus.*—Dr. Magelssen describes, in the *Norsk Magazin for Lægevidensk.*, a case of similar character to one of which he gave an account in the same journal in 1881. In the present instance, the patient was a previously healthy seamstress, aged 27, who had for nine years closely engaged in needlework in a clothes-factory in Christiania. Several years before she came under observation, she began to suffer from symptoms of weakness and exhaustion, and from headache, with a feeling as if the light (gas) by which she worked hurt her eyes. Nystagmus appeared first in the spring of 1880: at first the attacks were rare, but afterwards became more frequent, occurring at last several times weekly, and bearing on the whole a direct relation to the amount of over-exertion, nightwork, &c., to which she was subjected. The attacks generally came on in the following manner. While she was occupied with sewing in the evening, or at night, there suddenly came on a severe attack of giddiness, accompanied by a sharp whistling in the right ear, and cramp-like pains passing from the back of the head to the eyes. At the same time everything seemed to her to go round; first in large rather slow circles, and immediately afterwards in rapid horizontal oscillations, so that she was obliged to throw aside her needlework and press both hands to her eyes. With each attack she had always a sensation of everything moving rapidly towards and away from her eyes, while at the same time single objects, especially those most distant, seemed to fall over at the end of each oscillation. This sensation was constantly accompanied by some pain in the head and cramp-like feeling in the eyes. On pressing her hands over the eyes the attacks passed off after lasting for a few seconds or minutes; but they were sometimes so violent as greatly to alarm both the patient and those about her. Not unfrequently similar attacks occurred while she was in the street, in a light and atmosphere different from that of the room in which she worked; especially in the evening, when the gas-lights burned with an unsteady and flickering flame. On closer examination of the patient, it was found that nystagmic oscillations of the eye, of brief duration, were readily excited by moving a luminous object rapidly backward and forward before her eyes; this experiment, when carried to some extent, wearied and disquieted her. The author is of opinion that the history of this case corresponds in all points with that of miner's nystagmus. He thinks also that seamstresses are, like miners, often exposed during their work to over-exertion of the eyes, especially in northern countries and in large towns. Several cases of this affection may perhaps be detected in this class of people, now that attention has been directed to the subject. The author also suggests the possibility of there being some analogy between this affection and writer's cramp, and regards excessive exertion of the eyes in defective illumination as an essential etiological factor. The patient in the present case remained a year and a half under observation. After leaving off her sewing work, she became free from the nystagmus.

A. Henry, M.D.

4467. *Koltchevsky on Disappearance of Trachoma under the Influence of Erysipelas.*—In the *Vratch*, No. 9, 1885, p. 131, Dr. K. D. Koltchevsky details the case of a soldier, aged 22, in whom, four weeks after contagious conjunctivitis, binocular trachoma ('trachoma mixtum' of Stellwag, or 'trachoma papillare' of Blumberg, with great hypertrophy of the papillæ and folliculi) developed. Three months later, the patient was attacked with erysipelas limited to the right side of the face. An examination of the patient after his recovery (on the thirteenth day) showed that the right conjunctiva had become quite smooth and presented generally nothing abnormal, except slight hyperæmia, while the left conjunctiva remained as trachomatous as before the onset of erysipelas. The author fancies it possible that, in course of time, an artificially produced 'erysipelas medicatrix' may prove of great service in the treatment of trachoma.

4468. *Kïanitzyn on the Treatment of Contagious Conjunctivitis by Corrosive Sublimate.*—In the *Voënno-Meditsinsky Jürnal*, Nov. 1884, p. 101, Dr. J. Kïanitzyn details twelve cases of epidemic contagious conjunctivitis (Graefe's catarrh) which he treated, with very satisfactory results, by irrigating the eyes with a solution of corrosive sublimate. All the patients (soldiers) were admitted to the hospital on the second or third day of the disease with great swelling and œdema of the eyelids (especially of the upper), intense hyperæmia, ecchymoses, œdema, and infiltration of the sclerotic, profuse, viscid, purulent discharge, pain, burning, and slight photophobia. In none of the cases the cornea was affected. Four times daily the eyes were irrigated by means of an India-rubber syringe, with the solution of 2 or 2½ grains of sublimate in 1 fluid pound of water (about 1 : 2,000), the daily amount of the solution used in an individual case being 1 fluid pound. After two or three irrigations, purulent discharge markedly lessened; in eight cases it ceased entirely on the third day of the treatment; in the remaining four, on the fourth or fifth. The other symptoms disappeared more slowly (especially hyperæmia and œdema of the conjunctiva). Nine of the patients were discharged cured in seven or twelve days (from the beginning of the treatment); the remaining three on the twenty-first and eighteenth days. No toxic symptoms were observed.

4469. *Shtchastnyi on the Treatment of Epidemic Contagious, and Blennorrhoic, Conjunctivitis, by Strong Solutions of Nitrate of Silver.*—In the *Voenno-Sanitarnoie Delo*, No. 12, 1885, p. 117, Dr. A. J. Shtchastnyi, of Kiev Military Hospital, writes that he treated 20 cases of acute conjunctival blennorrhœa, and 35 cases of Graefe's catarrh ('Schwellungs - katarrh,' or 'conjunctivitis contagiosa epidemica' of Graefe; 'circular conjunctivitis,' or 'adenitis conjunctivæ contagiosa' of Szokalski) by painting the conjunctiva with a strong solution of nitrate of silver, and obtained excellent results. In blennorrhœa, a solution of 10 to 15 grains of silver salt in one ounce of distilled water was used, the paintings (by means of a pencil) being repeated once every twenty-four hours. All twenty cases recovered without any corneal complications; six cases were cured in seven days; eight, in ten; and six, in twelve or fourteen days. In cases of Graefe's catarrh, a solution of 10 grains of silver salt in one ounce of water was applied once a day, two or three applications being sufficient to bring resolution within five or six days. In another group of twenty-five cases of blennorrhœa, a combined treatment, consisting of scarification and cauterisation with nitrate of silver, was practised; in fourteen patients, both of the eyes recovered; of the remaining eleven cases (admitted to the hospital in advanced stage of corneal complication), two patients lost the sight of both eyes; three, that of one eye; two were discharged with defective sight on both sides; four, with one-sided defect. [In the *Voenno-Sanitarnoie Delo* for 1883-1884, the first article by Dr. Shtchastnyi, treating the same subject, may be found. In the *Vratch*, No. 23, 1881, p. 371, the same author published an able clinical summary of sixty cases of epidemic contagious conjunctivitis, which had come under his observation in Kiev in December 1880, and January and February 1881.—*Rep.*] V. Idelson, M.D.

4470. *Schuchardt on Chichm Seeds in Granular Ophthalmia.*—The author says that, like jequirity seeds in Brazil, chichm (chichou or cismatan) seeds have long been known in Egypt as a popular remedy in granular conjunctivitis or Egyptian ophthalmia. They are the seeds of a Cæsalpinea, of the Cassia absus; but also those of the Cassia auriculata are sometimes called by the same name, and employed for the same purpose. Ludwig Frank, physician to the then reigning Duchess of Parma, who visited Egypt in the beginning of the present century, appears to have been the first European physician who used these seeds in ophthalmia. He prepared and employed them in the same manner as the natives of Egypt. The finely powdered seeds are mixed with an equal quantity of powdered sugar, and kept in a well-closed vessel. About as much as the size of a wheat-grain of the powder is applied at the commencement of the disease, once a day, best in the evening; sometimes only once altogether. In case of increasing irritability of the eye, it is used only every other day. It is contra-indicated when there are intensive redness, pain, and copious lacrymation, in which case it will prove most beneficial after the abatement of the inflammation on about the eighth or tenth day. The powder is also mixed with other substances—*e.g.* with a small proportion of alum or tannin, and is beneficially used in slight opacities of the cornea. Frank confirmed from his own experience the efficacy of this remedy, which he preferred to any other collyrium. Its direct effects are an immediate but very slight sensation of heat, and more copious lacrymation. On C. F. Graefe's suggestion, very satisfactory trials with chichm seeds were made in opacities of the cornea, and in contagious ophthalmia; but after Rust's unfavourable report the use of this remedy fell for some time into abeyance. Dr. Schuchardt suggests comparative experiments with it on the healthy and on the diseased conjunctiva. [According to the *Pharmacopœia Germanica*, these seeds, semina cismæ (of the Cassia absus), contain mucine and a small proportion of essential oils. They are used in emulsions of 0·5 to 1·0 grammes in 100·0 of water (10 grains to 20 grains in ℥iij.), of which eight or ten minims are given two or three times daily.—*Rep.*]

4471. *Bordet on Jequirity.*—Dr. Gaspard Bordet, at present at Evian-les-Bains (Haute Savoie), late physician to the hospital and director of the Ophthalmic Clinic at Lyons, epitomising at the conclusion of his recently published pamphlet on 'Le jéquirity,' his experience on the efficacy of this remedy in the treatment of granular ophthalmia, remarks that jequirity can produce conjunctivitis of varying degrees. This may be confined to a simple injection of the conjunctiva, but more frequently it will be accompanied by a croupous exudation, by a considerable swelling of the lids, copious lacrymation, and a specific general condition. Such an ophthalmia, which may be repeatedly produced in the same individual at intervals of fifteen to twenty days, appears during the first week, mostly on the third day, and usually disappears again, without having caused any more serious complication on the sixteenth to the twenty-fifth day. The action of the jequirity seems not to depend upon a microbe, but on some chemical substance. Jequirity will not cure the granulation.

Ferd. Ad. Junker, M.D.

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

4472. Lefferts, George M.—Fistulæ Colli Congenitæ. (*New York Med. News*, May 5, 1883.)

4473. Winters, Joseph E.—Is the Operation of Tracheotomy in Diphtheritic Croup Dangerous? (*New York Med. Record*, Dec. 13, 1884.)

4474. Mackenzie, John.—Some Notes on the Pathology of Intranasal Inflammation. (*Philadelphia Med. News*, Oct. 1884.)

4475. Kalopinski.—Scrofulous Conjunctivitis associated with Nasal Catarrh. (*Med. News*, Sept. 1884; reference by Dr. J. C. Mulhall.)

4476. Ryersen.—When should Tonsils be Excised? (*Canada Lancet*, July 1884; reference by Dr. J. C. Mulhall.)

4477. Lefferts, George M.—Chronic Nasal Catarrh. Two Clinical Lectures. (*New York Med. News*, April 26 and May 3, 1884.)

4478. Palmer.—Cod-liver Oil and Lime-water in Scalded Throat. (*Practitioner*, April.)

4479. Jordan.—A New Operation for Naso-pharyngeal Polypi. (*Brit. Med. Jour.*, May, p. 888.)

4480. Voltolini. — Removal of Polypi from the Larynx. (*Deutsche Med. Wochensch.*, May 21.)

4481. Salzer.—Extirpation of the Larynx. (*Archiv für Klin. Chir.*, Band xxxi., Heft 4.)

Art. 4472. *Lefferts on Cervico-Branchial Fistula.*—Dr. Lefferts gives the history of a case of incomplete external congenital fistula of the neck, and mentions the points of diagnosis between it and other forms of fistulæ in this situation.

4473. *Winters on Tracheotomy in Diphtheritic Croup.*—The author puts in a plea for the early performance of tracheotomy in diphtheritic croup when there is no doubt of the presence of membrane, and when ordinary remedies fail to relieve the dyspnœa. He concludes with a table, giving references to eighty-two successful tracheotomies by different surgeons for croup in children two years of age and under.

4475. *Kalopinski on Scrofulous Conjunctivitis associated with Nasal Catarrh.*—Dr. Kalopinski has treated nineteen cases of this affection by directing his medication entirely to the nose. The results were always good. The principal agent was sniffing or injection of a solution of chlorate of potash, 15 grains to the ounce, several times daily.

4476. *Ryersen on Excision of the Tonsils.*—Dr. Ryersen answers the question, 'When should tonsils be excised?' by saying, Whenever they impair respiration, general nutrition, or the health of the contiguous parts.

4477. *Lefferts on Chronic Nasal Catarrh.*—Dr. Lefferts uses for cleansing purposes a very coarse anterior nasal spray or an anterior or posterior nasal syringe. He strongly condemns the nasal douche. For cleansing with the spray apparatus he employs various combinations of carbolic acid, biborate of soda, bicarbonate of soda, 'Listerine' and water. 'Listerine' is a preparation by Lambert & Co., of St. Louis, containing the essential antiseptic constituents of thyme, eucalyptus, baptisia, gaultheria, and mentha arvensis in combination. Each fluid drachm also contains two grains of refined and purified benzo-boracic acid. It may also be used in combination with alteratives, astringents, and resolvents, generally 2 to 10 parts of water to one of 'Listerine.' He decries sodium chloride, believing it does more harm than good, by favouring endosmosis as it passes over the nasal mucous membrane. For medication the author prefers postnasal sprays, which can be effectually employed only in combination with a palate hook. In simple chronic rhinitis the author recommends the following sprays, giving them in the order of their preference:—1, zinci iodidi, gr. v. ad ʒj.; 2, zinci sulpho-carbolatis, gr. v. ad ʒj.; 3. zinci sulphatis, gr. v. ad ℥j.; 4, ferri et ammon. sulphatis, gr. v. ad ʒj.; 5, ferri perchloridi, gr. v. ad ʒj.; 6, acid. tannic., gr. v.-xx., ad ʒj.; 7, potass. chloratis, ℈j. ad ʒj. 'Listerine' may be substituted for a part of the water in any of these solutions. When the inflammation has advanced far towards the hypertrophic stage the author commences with:—Iodini cryst., gr. iv., potass. iodidi, gr. x., zinci iodidi, ℈j., zinci sulphocarbolatis, ℈j., 'Listerine,' ʒj., aquam ad ℥iv. as a spray. Care should be taken never to use these solutions of sufficient strength to cause irritation of the mucous membrane.. Daily, and afterwards less frequent, applications, will as a rule be required for at least 8 to 10 weeks. In hypertrophic rhinitis the author gives preference, as destructive agents, in the following order: fuming nitric acid, glacial acetic acid, chromic acid, the galvanic or actual cautery, and nitrate of silver. Jarvis's snare and postnasal forceps are required for special conditions.

E. Cresswell Baber, M.B.

4478. *Palmer on Cod-liver Oil and Lime-water in Scalded Throat.*—In the *Practitioner*, April 1885, Mr. H. D. Palmer records the case of a little girl aged 3, who had attempted to drink boiling water from the spout of a tea-kettle. She succeeded in taking enough to scald the throat most severely, and when Mr. Palmer arrived the child was almost dead from shock. The treatment adopted was as follows. Nothing but equal parts of cod-liver oil and lime-water was given in teaspoonful doses every hour. After three days the child began to revive, and in about a week all distress of breathing subsided. As the child improved, milk was added to its diet, and the oil and lime-water were reduced gradually.

4479. *Jordan on a New Operation for Naso-pharyngeal Polypus.*—In the *Brit. Med. Jour.*, May 1885, p. 888, Mr. Furneaux Jordan describes a very simple operation for the removal of a fibrous growth from the nose and pharynx. The leading principle of the operation is to thoroughly uncover the bony orifice of the nasal cavity. This is done by making a triangular flap out of the upper lip, and the side of the nose. A curved bistoury is carried under the lip into the affected nostril, and made to cut its way out. Then the soft part of the nose is divided on one side of the middle line, in a line with the cut in the lip. A few touches of the knife permit the flap to be turned well outwards. The nasal cavity will be found expanded, well defined, and open to any sort of manipulation. To-and-fro traction by one or two fingers in the pharynx, and one or two at the front, aided, perhaps, by snips of scissors or knife, will readily detach the tumour, which falls into the hand in the mouth.

Richard Neale, M.D.

4480. *Voltolini on Removal of Laryngeal Polypi.*—In the *Deutsche Med. Wochensch.*, of May 21, Professor Voltolini, of Breslau, recommends his new method of removing polypi from the larynx. He passes down a bent wire, armed at the end with a small piece of sponge fixed firmly on, and removes the growths by rubbing it backwards and forwards. The tongue must be held firmly forward during the whole process, as the sponge will slip out of the larynx if it is allowed to fall back. The method has the advantage of being able to be carried out, if necessary, without a laryngoscope or artificial light of any kind; and in some instances it has even been done by feeling alone, the tip of the index finger of one hand being kept on the arytenoid cartilages, while the sponge is guided along past it by the other hand. Several cases are cited, in which the new method has been employed with great success.

Alice Ker, M.D.

4481. *Salzer on Extirpation of the Larynx.*—In a return of operations performed on the larynx in Billroth's clinic from 1870-84 (*Archiv für Klin. Chir.*, Band xxxi., Heft 4), Dr. Fritz Salzer records 7 cases of partial removal and 5 cases of total extirpation of this organ. Of the cases of partial removal, 5 were successful and 2 fatal; death having resulted in one instance from septic poisoning on the fortieth, and in the other from pneumonia on the forty-first day. Of the five cases of complete removal, all ended fatally, three patients having died soon after the operation; one from relapse of the disease seven months after the operation, and one five weeks after the operation, from injury caused by passing an œsophageal bougie. Dr. Salzer advocates strongly, in operations for removal of the larynx, the use of antiseptic dressings, and the practice of preliminary tracheotomy, with the introduction of Trendelenburg's 'tampon cannula' into the trachea. When tracheotomy is not performed before the removal of the larynx, and the wound is completely closed and not dressed antiseptically, the following dangers are likely to result: bleeding into the air-passages, œdema of the mucous membrane, emphysema, compression of the trachea by accumulated blood or inflammatory effusions, burrowing of pus between the layers of fascia, pulmonary affections, and pyæmia. In many cases where tracheotomy had not been performed before removal of the larynx, it was found necessary to open the trachea either during or after this operation. Occasionally, the pharynx has been plugged with sponges, in order to prevent the flow of saliva over the seat of operation. After extirpation of the larynx the wound is usually left quite open, or is but partially closed by sutures. For a few days after the operation, Thiersch keeps the head of the patient at a lower level than the rest of the body, in order to prevent any infective mischief in the lungs. Great importance is attached by Salzer to careful antiseptic dressing after operations on the larynx.

The good results that have of late been obtained by many surgeons in such cases, sufficiently attest the value of such details of after-treatment as irrigation of the larynx, the filling the cavity by wadding impregnated with carbolic acid, salicylic acid, benzoin or iodoform, and the frequent cleansing of the oral cavity by disinfectant fluids. Billroth, in cases of removal of the larynx, prefers as a dressing iodoform gauze. The wound-cavity is plugged with this material, which is not removed until after the fifth day; and the patient, if not able to swallow, is then fed through an œsophageal tube. The plugging of the whole wound with iodoform gauze after the operation has three advantages. In the first place, it prevents infection of the raw surfaces; secondly, it prevents any flow of saliva, food, and wound-secretion into the trachea; and, thirdly, the patient immediately or soon after the operation is able to swallow. This he is not always able to do after the removal of the gauze plugs. Salzer recommends that the antiseptic dressings applied after the operation be allowed to remain, if possible, for some days, as healing of the wound is thus favoured, and the dangers of secondary hæmorrhage and infection are much diminished. W. JOHNSON SMITH.

ANATOMY.

RECENT PAPERS.

4482. DUKHNOVSKY.—On a Case of Absence of the Patella. (*Proceedings of the Odessa Medical Society*, No. 11, 1884, pp. 161–62.)

4483. LUSSANA. — The Cerebral Index. (*Archivio Italiano per le Malatie Nervose*, 1885, Fasc. ii.)

4484. ROSCIOLI.—Contribution to the Cellular Morphology of the Frontal Convolutions. (*Riv. Sper. di Fren.*, Anno xi., Fasc. i., 1885.)

4485. VENTURI.—The Mechanism of the Movements of the Brain in Relation to the Movements of the Head. (*Riv. Sper. di Fren.*, 1885, Fasc. i.)

ART. 4482. *Dukhnovsky on a Case of Absence of the Patella.*—Dr. Dukhnovsky, of Odessa, records (*Proceedings of the Odessa Medical Society*, No. 11, 1884, p. 161) the case of a soldier, aged 22, who complained of difficulty experienced by him in walking and of general weakness and fatigue of his lower limbs. Examination detected a complete absence of the right patella, and a rudimentary state of the left, the latter presenting a cartilaginous body about the size of a small almond. There were found, also, flat feet, atrophy of the leg-muscles, and rotation of the feet and legs outwards. The patient's gait was not unlike to that of a tabetic subject, the feet and legs being thrown outwards in walking. Flexion in the knee-joints was extremely free, the patient being able, without any effort, to touch his buttocks with the heels. He was ultimately discharged as unfit for military service. Dr. Bernstein, of Odessa, saw a very similar case (of absence of one patella, and rudimentary development of the other) in a young officer, of short stature and weak build, and with tottering gait. It is curious to note that the officer, though an intelligent person, even did not suspect that there was anything wrong about his knee-caps. [Similar rare cases were published, also, by Lane and Hilton, as Dr. R. Neale's *Digest*, sect. 1762 : 3, shows.—*Rep.*] V. IDELSON, M.D.

4483. *Lussana on the Cerebral Index.*—It is not always borne in mind that the cephalic index is not the same as the cerebral index. Ten years ago, Calori showed that the cerebral index was always from 1 to 4 points higher than the cephalic. By cephalic or cerebral index, is meant of course the relation of breadth to length of skull or brain respectively (breadth divided by length). Professor Lussana has made a number of measurements on the brains of animals in the Institute of Zoology and of Physiology in Padua. From these measurements he draws the following conclusions. 1. Every great natural family of animals has a particular and almost constant cerebral index: 80 for anthropoids and reptiles; 85 for the sheep, for the horse, and for the pig; 90 for the dog; 100 for the feline tribe, for rodents, and for serpents; 130 for birds and fishes. 2. The various degrees of the cerebral index in the zoological scale do not stand in relation with the various degree of psychical development. 3. The results of the cerebral indexes are not very favourable to the doctrine of Gall, at any rate in mammalia, though favourable enough in oviparous animals, especially in birds of prey and serpents. 4. The necessity for studying the special anatomy of the cerebral convolutions rather than the cranium and the general form of the brain is always more evident.

4484. *Roscioli on the Cellular Morphology of the Frontal Convolutions.* — The author, under the guidance of Dr. V. Marchi, of Reggio, has made some interesting studies on this subject in man and in the higher animals. The method employed was Golgi's black staining (*see* LONDON MEDICAL RECORD, May 1885, p. 207). The prevalent form of cell in man, as well as in the calf and in the monkey, was found to be the pyramidal. These are the cells too that vary most in size, though a medium size (25 to 30 μ) was most abundant. Cells of other shape rarely exceeded this magnitude, and more commonly were small (10 to 15 μ). The author sums up his conclusions as follows. 1. The prevalent cellular form in the first frontal convolution in man, in the monkey, and in the calf, is the pyramidal. The other forms are very rare. All are disposed irregularly, so that an exact division by strata, after the manner of Meynert, Major, Lewis, Betz, and others, is not possible. 2. The pyramidal cells are those that in this region offer the most notable differences in size; and, whilst all dimensions may be met with in any part of the first frontal convolution, nevertheless the medium-sized prevail in man, the large in the calf, the small in the anterior two-fifths of the same convolution in the monkey. 3. In man and in the calf, no difference of structure is to be observed between the anterior middle and posterior parts; in the monkey only is there a slight increase of large cells in the posterior three-fifths. 4. Almost all the cells belong to Golgi's first type, those of the second type being very rare. (*See* LONDON MEDICAL RECORD, October 1884.) 5. The neuroglia-cells are characteristic both by their form and by the numerous fine prolongations with which they are provided; they are also furnished with more robust prolongations, which are inserted into the walls of the vessels by means of an umbiliform expansion.

4485. *Venturi on the Movements of the Brain.*—Professor Luys, in a recent communication to the Academy of Medicine in Paris, claimed to have discovered a mobility of the brain within the skull, independent of respiratory and circulatory influences, and much greater than anything of the kind previously recognised. He stated also that a free space existed between the surface of the brain and the inner wall of the cranium. Professor Venturi's attention has been directed to the same subject, and in part he confirms the position held by Professor Luys. Professor Venturi's opinions are derived from one pathological observation, and from various *post mortem* experiments. In an epileptic who died, one part of the skull, which in general was rather thick, was found thinned and translucent. This corresponded to an enlarged Pacchionian body; but was much larger than it in extent, though in depth closely agreeing with the height of the body in question. The height of the Pacchionian body was 3½ millimètres; the depth of the excavation in the skull was 3 millimètres. The excavation was somewhat longitudinal in form, and was about 1½ centimètres across, and about 2½ centimètres in length. [The author's account of the dimensions is obscure, but this is probably his meaning.—*Rep.*] This case led to some experiments to determine the following points:—(1) whether the brain in the cadaver moved; (2) whether in the various positions of the head there was a free circumcerebral space; (3) the mechanism of the movements, if these were found to be present. The experiments were carried out by making small openings in a different part of the skull in each of four dead bodies. The relative position of the cranium and of the membranes, or of the cerebrum, or of all three, was determined by pins; and then the head was placed in various positions. The result would seem to be that not merely is there movement of the brain within the dura mater in accordance with gravity, but there is also a movement of the dura mater in the same direction. The author does not find any evidence that during life there would be a free circumcerebral space.

WILLIAM R. HUGGARD, M.D.

PHYSIOLOGY.

RECENT PAPERS.

4486. NESHEL, VASILY E.—A contribution to the Study of Gastric Digestion. (*Vratch*, 1885, No. 10, pp. 145-46.)

4487. FANO, PROFESSOR G.—On Reflex Movements of the Blood-vessels in Man. (*La Salute*, Fasc i., 1885.)

4488. AMRUS AND GÄRTNER.—The Action of the Heart in Chloroform Narcosis. (*Wiener Med. Blätter*, No. 20.)

4489. UGHETTI.—On Regeneration of the Liver. (*Gazz. degli Ospitali*, June 3, 1885.)

ART. 4486. *Neshel on Gastric Digestion.*—In 1879 Dr. S. D. Kosturin published (in Manasseïn's *Sbornik Rabot*, 1879, Fasc. iii.) his experiments on dogs, which seemed to prove that under the influence of the ingestion of hot fluids (from 45° to 65° C. = 113° to 149° F.) the mucous membrane of the stomach underwent a parenchymatous and interstitial inflammatory process, with subsequent hypertrophy. Dr. Kosturin's results induced Dr. Vasily E. Neshel, of St. Petersburg, to undertake some observations on men in order to study the influence of the ingestion of hot fluids and food on the course of gastric digestion. In a preliminary note in the *Vratch*, 1885, No. 10, p. 145, the author states that he made twenty experiments on fifteen non-febrile bed-ridden patients, with various traumatic injuries of the lower limbs. Ten experiments served to elucidate the action of hot tea (at from 40° to 75° C. = 104° to 167° F.), and the other ten that of hot dinner (soup at 72° C. = 161°·6 F., and roast beef at 50° to 65° C. = 122° to 149° F.). The course of gastric digestion was examined after Kussmaul's method, that is, by means of washing out the stomach (a method which had been already successfully applied for the study of gastric digestion by Drs. Buchner, Fleischer, Krestschy, Petrone, &c.). The results obtained by Dr. Neshel may be given thus. 1. When taken in quantity up to three glassfuls after dinner, hot tea [prepared after the Russian manner, that is, presenting only an infusion of tea-leaves, and not boiled.—*Rep.*] does not alter the course of gastric digestion. 2. When taken in quantity above three glassfuls, it retards gastric digestion. 3. *Cæteris paribus*, the temperature of food (within the limits described above) does not alter the course of gastric digestion in any way.

V. IDELSON, M.D.

4487. *Fano on Reflex Movements of the Blood-vessels in Man.*—Professor Fano contributes to *La Salute*, Fasc i., 1885, an abstract of his work on this subject, which will shortly be published. He concludes that the blood-vessels react by contracting to electrical stimuli. The time of the reaction of the vessels is always long, oscillating between two and seven seconds, according to the varying conditions in which the patient is found, and the region of the body to which the stimulus is applied. The contraction of the vessels, following an electrical stimulus, is more distinct in sleep than in waking. The time elapsing between the application of the stimulus and the reaction of the vessels is longer in sleep than in waking. The reaction of the vessels always occurs first in the upper extremities and then in the lower, and this independently of the point at which the stimulus is applied. The contraction of the vessels in the lower extremities, although occurring later than in the upper extremities, lasts much longer; that is, the vessels of the upper extremities regain their normal volume much more quickly. The vessels of the upper extremities always contract more quickly than those of the lower extremities; that is, they always attain much more quickly the greatest degree of contraction, and again more quickly relax. If the patient be fasting, his vessels respond very little to stimuli; they react, on the other hand, with great energy after an abundant meal. All other stimuli besides the electrical produce the same effects; if the patient be propounded a question or given a calculation to work out, the vessels of the extremities are found to contract in the same way as after electrical stimuli. The contraction of the vessels is directly proportioned to the intensity of the stimulus. This relation is maintained also in the case of mental effort; the greater the psychical activity imposed on the patient, the more intense and rapid is the reaction of the vessels.

G. D'ARCY ADAMS, M.D.

4488. *Amrus on Action of the Heart in Chloroform Narcosis.*—Amrus and Gärtner (*Wiener Med. Blätter*, No. 20) find as the result of experiments conducted in Professor Stricker's laboratory, that when an animal is brought deeply under chloroform, and the peripheral end of one vagus in the neck is irritated by a very weak faradaic current, the following results are produced. 1. The stoppage of the heart's action under continuous irritation lasts for an extraordinary time (often over a minute), considering the slight intensity of the current. 2. There is for each case a definite and relatively low intensity of the current under which the stoppage of the heart reaches its maximum duration. If the current be made either stronger or weaker, the state of arrest ceases. 3. When the stoppage of the heart has been maintained for twenty-five or thirty seconds, respiration also ceases, and slight spasms succeed. These experiments show that death under chloroform may be brought about by the influence on the vagus nerve.

E. F. WILLOUGHBY, M.B.

4489. *Ughetti on Regeneration of the Liver.*—Professor Ughetti, of Catania, remarks that experimental investigations have not given identical results in the hands of different observers. According to Colucci, when a portion of the hepatic tissue is removed, a true regeneration takes place by transformation of leucocytes into hepatic cells. Tizzoni and Corona have found the new hepatic cells to be formed by proliferation of the hepatic cells that are left. Griffini again ascribes the principal share in the regeneration of the hepatic cells to proliferation of the epithelium of the biliary canaliculi. Previous observers confined their experiments to the edges or outside of the organ. Professor Ughetti, however, in a manner which he will describe more fully in a later communication, succeeded in removing portions of the liver at some depth in the dog and in the rabbit. He found that, when the size of the internal wound is considerable, and especially if it communicate freely with the external portion of the organ, regeneration may take place, chiefly by proliferation of the hepatic cells; that on the contrary, when the wound is not large and is not in direct communication with the peritoneal surface, there is, for the most part, no true regeneration. The repair is merely cicatricial, and is formed at the expense of the interlobular connective tissue. In these cases, there is no multiplication of the hepatic cells; on the contrary, the hepatic cells in the neighbourhood are atrophied from compression by the new formation.

WILLIAM R. HUGGARD, M.D.

MEDICAL CHEMISTRY.

RECENT PAPERS.

4490. BUFALINI, G.—Antiseptic Action of the Biliary Principles. (*Annali Univ. di Medicina*, March 1885.)

4491. ANDEER, JUSTIN.—The Seat of the Formation of the Aromatics, and principally of Resorcin in the Body of certain Mammals. (*Gazz. Med. Ital. Lombard.*, May 9, 1885.)

4492. PAVY.—Ferrocyanic Test-pellets for Albumen. (*Lancet*, June, p. 1073.)

4493. BEST.—A Method of Testing for Albumen in Urine. (*Brit. Med. Jour.*, June, p. 1198.)

ART. 4490. *Bufalini on the Antiseptic Action of the Biliary Principles.*—Bufalini, after noticing the observations of others on the antiseptic action of bile, records certain experiments made, in conjunction with Professor Giannuzzi, to establish the alteration which bile undergoes by itself and when in contact with a ferment. From these experiments it results that any antiputrescent action on the intestinal contents must be denied to bile, and that bile itself, in presence of the ferment of beer, readily decomposes, which the gastric juice does not. This ready decomposition of the bile is due to the mucus it contains. Solutions of the biliary salts exposed to the action of the same ferment decompose much less readily, while the mucus by itself, under the same conditions, decomposes very quickly. The author, however, observes that the argument must be studied with regard to each of those substances, to which the bile gives origin as it decomposes in the intestine; and, after citing the experiments of Maly and Emich, showing that taurocholic acid has much greater antiseptic action than glycocholic acid, he gives the experiments which he himself has made by placing in contact with various ferments, solutions of taurin, taurocholic acid, glycocholic and cholalic acids, biliary salts, and bile itself. Of all these substances, when placed in contact with beer-ferment, bile is the only one which did not retard decomposition. In the presence of a solution of glucose and yeast, the biliary salts and bile considerably augmented the development of gas. With the same ferment in an infusion of fresh pancreas in sterilised water, cholalic acid showed the greatest antiseptic power; then, in decreasing order, taurin, glycocholic acid, and taurocholic acid. These last three substances, mixed with blood-serum, in the presence of yeast, retarded fermentation in a different order, taurocholic acid more than glycocholic acid, and this more than taurin. The author closes his series of experiments by comparing the antiseptic power of hydrochloric acid with that of cholalic acid, which is the chief antiseptic of the biliary principles; it, however, is decidedly inferior to hydrochloric acid. He observes that the antiseptic power of cholalic acid is very important, since this acid is found in the fæces, and hence must hinder the fermentation of the contents of the large intestine. The gastric juice owes its antiseptic properties to the presence of hydrochloric acid. Some of his experiments confirm the opinion of Chiappelli that the bile has the property of absorbing the intestinal gases. A solution of soda, however, of the same degree of alkalinity as the bile, absorbs more (as hydrosulphuric acid) than simple bile, in the proportion of 38 cubic centimètres per cent. instead of 32 cubic centimètres per cent.

4491. *Andeer on the Seat of the Formation of the Aromatics, and especially of Resorcin in the Body of certain Mammals.*—Dr. Andeer, while studying the disinfectant action of mono-, di-, and triphenols occurring in animal secretions, found to his surprise that, of all these aromatics, resorcin was the one most constantly present. This discovery led to the probable hypothesis of the transformation in the animal body of resorcin, which is a diphenol, into a mono-phenol, by the elimination of an hydroxyll (O H). While staying in the Swiss Alps he observed that mammals, whose milk is used by man, had a marked preference for those herbs and plants in which much orcin and resorcin is present; this led him to inquire whether these two substances were transformed by a natural process in the animal body, as occurs artificially in the laboratory, and thus to bring scientific proof of the first supposition. When to the limpid serum not yet become milk, in the mammary gland of the cow, removed from the body, a certain quantity of the above-named aromatics is added, milk of the ordinary colour and natural taste is obtained, with the same intrinsic power of keeping for a certain time according to the temperature and other conditions. This artificial formation (of the colour) of milk led him to think that the natural formation in the living animal is due to the resorcin, obtained by the mammary gland from the food of the animal. But this is not so ; it is not the resorcin, but the phenol which is derived from it, which is engaged in the elaboration of the milk. In certain parts of the gland succinic phthalin, resorcinic phthalin, and phenic phthalin were found. All these are readily changed into resorcin by bromine and other chemical agents. Other aromatics belonging to the mono- and di-phenols were also found, having the double property of components and disinfectants, such as thymol, anisol, cymol, and cymothymol ; in fact, all these found in the plants serving as food to the animals. When these elements are wanting or absent from a pathological state or organic lesion of the glands, the milk may even become changed in the teats, and after its withdrawal it decomposes rapidly, and so becomes harmful to man, giving rise to septic diseases as diarrhœa, dysentery, &c. Resorcin causes cream and butter to keep, as it does milk. If a certain quantity of resorcin be added to cream, a greater quantity of butter is obtained. The yellow colour of butter is due to resorcin, which, with phenol, also gives the characteristic sweetish taste to the serum. The taste and quality of milk, cream, and butter is improved by their addition. Andeer has also discovered the presence of a peptone in great quantity in the mammary gland, and has extracted and isolated it. He has not yet found it in milk, but it is probably present, and to it milk doubtlessly owes its great digestibility.

G. D'Arcy Adams, M.D.

4492. *Pavy on Ferrocyanic Test-pellets for Albumen.*—In the *Lancet*, June 1885, p. 1073, Dr. Pavy fully describes the preparation and application of his very convenient pellets for testing albumen. A celluloid tube, with a central partition and a screw-cap at either end, holds the citric acid pellets on one side, and pellets of pure ferrocyanide of sodium on the other. This celluloid tube fits into a short glass test-tube, which can be carried in the waistcoat pocket without fear of breakage. In testing urine, a drachm is placed in the glass tube with a citric acid pellet, in order to acidulate the urine, and, when dissolved, a ferrocyanide pellet is dropped in, the tube being gently shaken to facilitate solution. If now there be a precipitate, it can only be albumen. No heat is required. If the urine be very acid, then it may become cloudy on adding the citric acid pellet, uric acid being thrown down ; but the addition of an equal quantity of warm water, or very gentle heat, will dissolve the precipitated uric acid, and the ferrocyanic salt throws down any albumen present. Dr. Pavy believes this test to be the most delicate, and the one most free from fallacy that has yet been employed, and, at the same time, the most easy and simple.

4493. *Best on a New Method of Testing Albuminous Urine.*—Mr. G. P. Best describes in the *Brit. Med. Jour.*, June 1885, p. 1198, an ingenious plan for testing urine. He dips a syringe into the chamber-utensil and draws up a small quantity of the urine, and then, inserting the nozzle of the syringe into nitric acid, sucks in a drop or two of that fluid ; the well known hazy line at the touching point of these two fluids indicates the presence of albumen.

Richard Neale, M.D.

Prizes.—The Académie de Médecine has awarded to Dr. Strauss and Dr. Roux a prize of 2,000 francs (80*l.*) each for their voluntary researches on cholera at Toulon.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

4494. Wiegandt.—On a Case of Osteoma Cerebelli. (*Meditz. Obozr.*, Fasc. v., 1885, p. 474.)

4495. Puzey.—A Case of Progressive Paralysis of the Ulnar Nerve. (*Brit. Med. Jour.*, May, p. 979.)

4496. Duckworth.—A Case of Disseminated Cerebro-spinal Sclerosis. (*Lancet*, p. 879.)

Art. 4494. *Wiegandt on a Case of Osteoma of the Cerebellum.*—Dr. Wiegandt (*Meditz. Obozr.*, Fasc. v., 1885), while making a *post mortem* examination on the body of a patient, aged 62, found an extremely hard tumour in the substance of the anterior part of the left lobe of the cerebellum. The existence of the growth remained quite unsuspected during the patient's life, the cause of his death being cancer of the gullet. The cerebellar tumour had an irregularly oval shape and an uneven, knotty surface, and was 2⅓ centimètres in length, 1½ in breadth, and 1⅓ in thickness. It was inclosed in a thin, but firm connective-tissue capsule. The centre of the new growth was occupied by a connective-tissue nucleus, about the size of a pea. Under the microscope, the tumour was found consisting of true osseous tissue with numerous canaliculi. No cartilaginous elements were detected. [A rare case of osteo-enchondroma of the cerebellum was lately published by Mr. Ch. Atkins, of Sheffield, in the *Lancet*, May 9, 1885, p. 841.—*Rep.*]

V. Idelson, M.D.

4495. *Puzey on a Case of Progressive Paralysis of the Ulnar Nerve.*—In the *Brit. Med. Jour.*, May 1885, p. 979, Mr. C. Puzey records an interesting case of progressive paralysis of the ulnar nerve consequent upon injury, upon which he successfully operated. The patient, a lad aged 15, caught his forearm in the 'travelling band' of a wheel which was revolving rapidly, and sustained a compound fracture. The radius healed readily, but with the ulna some time elapsed before union was complete. About six weeks after the accident, it was noticed that the little and ring fingers were becoming obstinately flexed. A splint was constructed to overcome this, and, a day or two after this was applied, the parts became blistered and discoloured. It was then ascertained that the lad had felt curious sensations in these fingers ever since the accident, but had refrained from complaining. Four months later, the hand was rapidly assuming the characteristic 'bird's claw' appearance, and there was complete anæsthesia of all the surface usually supplied by the ulnar nerve. Mr. Puzey decided to cut down upon the thickened part of the ulna, and to explore the tissues around. An incision was made as for exposing the ulnar artery; and, on arriving at the thickened bone, a band of what seemed to be thickened periosteum was found tightly stretched over the callus. This was found to be the ulnar nerve, and was traced upwards and downwards. The nerve was healthy above, but below it was pale and apparently wasted. After gently lifting the nerve away from the bone, Mr. Puzey connected a few fibres of the flexor carpi ulnaris with the adjacent flexor profundus digitorum, thus interposing a fleshy bed between the nerve and the bone. The wound was then closed and dressed in the usual Listerian method. Four weeks subsequently the lad had perfectly recovered, and was performing his usual duties.

4496. *Duckworth on a Case of Disseminated Cerebro-spinal Sclerosis.*—In the *Lancet*, May 1885, p. 879, Dr. Dyce Duckworth relates a case of disseminated sclerosis in an early stage, affecting exclusively the right extremities. The patient was a groom, aged 21. About June 1884, he noticed trembling movements in the right arm when used, and, later on, the right leg became affected. There was no history of any previous illness, but his duties had exposed him to all kinds of weather. When seen in Feb. 1885 there was a distinct peculiarity of gait noticeable in the right leg; the limb moved stiffly, and was lifted higher off the ground than the other; it was altogether clumsy in its movements. When he held a glass of water in his right hand, violent spasmodic tremors occurred, so that the fluid was all spilt before he could bring the glass to his mouth. When the patient stood quietly, the right arm remained free from tremor. There were no signs of wasting in the muscles, though the grasp of this hand was much weaker than that of the left. The knee-reflexes were exaggerated on the right side, and there was no ankle-clonus to be obtained. The diagnosis arrived at by Dr. Duckworth was the following: sclerotic patches situated in the left half of the brain, possibly in the corpus striatum or crus, and possibly in some portion of the medulla spinalis. The case was, in fact, one of insular or disseminated cerebro-spinal sclerosis, or Charcot's disease, in an early stage. The prognosis of the case must be grave; and, with regard to treatment, the author decided to give the patient three grains of blue pill every night, on the ground that mercury possesses great power of modifying nutritional force. The future history will be looked for with much interest, as the author promises to bring the case forward at a future time. Richard Neale, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

4497. Ebermann, A. L.—On Nocturnal Incontinence of Urine. (*Medico-Pedagogitchesky Vestnik* [*The Medico-Pædagogical Herald*], February 1885. pp. 25–35).

4498. Lucas.—Gangrene after Vaccination. (*Guy's Hospital Reports*, vol. xlii.)

Art. 4497. *Ebermann on Nocturnal Incontinence of Urine.*—In the *Medico-Pedagogitchesky Vestnik*, February 1885, p. 25, Dr. A. L. Ebermann, of St. Petersburg, discusses the pathology and treatment of nocturnal incontinence of urine in children, and insists on the necessity of a strict individualisation of the cases. He divides the latter into five categories: 1. Incontinence of urine from failure of sphincter; 2. Incontinence from increase of contractile strength of the detrusor; 3. Incontinence from diminution of capacity of the bladder, which diminution results from the patient's adhering to the infantile habit of very often voiding urine; 4. Incontinence from atony or hyperextension of the bladder; 5. Incontinence from irritation of the vesical cervix by stones. The first variety of the cases may be recognised on the ground of—*a*, inability of the patient to retain urine also during daytime; and, *b*, easy penetration of a *bougie à boule* into the bladder. The second form may be determined by—*a*. powerful ejection of water injected into the bladder; and *b*. pain felt by the patient when he tries to retain urine in presence of a call for micturition. The third category is diagnosed also by means of injecting water into the bladder; when the capacity of the bladder is diminished, the viscus admits only a certain small quantity of fluid, corresponding to the usual quantity of urine voided by the patient at a time; on injection of a surplus, the fluid flows back more or less rapidly, according to the degree of pressure on the piston of the syringe. Atony of the bladder is easily recognised from escaping of a large quantity of urine through a catheter introduced immediately after spontaneous micturition. The fifth group of the cases is diagnosed by the sound. As to the treatment, Dr. Ebermann recommends for the first group the administration of nux vomica or strychnine, the ascending *douche* to the perinæum, and, above all, electricity in the shape of faradisation, or, in obstinate cases, interrupted galvanisation, the cathode being placed at the perinæum, the anode at the hypogastrium or sacrum; for the second group, belladonna in increasing doses (beginning with 6 centigrammes five or six times daily); still better, chloral, and in anæmic children, solution of perchloride of iron; for the third group, exercise of the patient's control over the bladder, intravesical injection of water (at 30° or 35° Reaum.) in gradually increasing quantities; for the fourth, frequent catheterisation, vesical injection of water (16° or 18° Reaum.), and electrisation; for the fifth, lithotomy or lithotrity. The author concludes his article with details of ten cases.

V. Idelson, M.D.

4498. *Lucas on Gangrene after Vaccination.*—In vol. xlii. of *Guy's Hospital Reports*, Mr. Clement Lucas narrates a case where gangrene occurred in a feeble emaciated child, five months of age, after vaccination and as the result of it. Two attempts to vaccinate the child had proved unsuccessful; but, after the third, gangrene of the neighbourhood of the punctures supervened, and the child died without special symptoms of note. There was no question of vaccino-syphilis in the case, for four other children were vaccinated from the same vaccinifer without difficulty or bad symptom, and the question of inherited syphilis in the child is hardly to be accepted from the data given. The only conclusion arrived at with a fair amount of reason was, that here was a case in which vitality was low from malnutrition, and that the insertion of the vaccine operated as any irritant would have acted on such a subject. Such effects occur at times, and emphasise the caution to which all public vaccinators are alive, in selecting fit cases for the operation, or perhaps, more correctly, in rejecting unfit cases. The boon of vaccination is not diminished by learning the truth, such as is honestly given here. W. W. Wagstaffe.

REVIEWS.

Article 4499.

Surgical Operations.—Part I. The Ligature of Arteries. By Sir William Mac Cormac, Surgeon to and Lecturer on Surgery at St. Thomas's Hospital. London: Smith, Elder, & Co. 1885.

We rise from a careful examination of this treatise with a sense of unmixed satisfaction with the work, and feel that, when completed along the same lines and with the same thoroughness as this first part, the whole is likely to become the standard book on its subject in our language. Every surgeon will, of course, look at it critically; and we notice differences from the practice which certain surgeons, ourselves among the number, have adopted in minor details, and less stress perhaps laid upon certain points than we might think advisable; but we are more and more pleased with the work after each perusal. We have rarely met with one which combines so many good points, or which meets the requirements of a text-book upon an essentially practical subject better than this appears to do.

The author says in the preface that his purpose is to give a brief, but, he hopes, an accurate, statement of the manner in which the operations may be performed, and in each case to illustrate by diagrams the more important anatomical relations of the parts. In both respects, it must be allowed that he has succeeded well. If we take a portion of the text, it will serve as an example of the terseness and clearness of style. Under the heading of 'Ligature of the femoral artery' we find a page concerned with the indications for operation, then a page on the surgical anatomy of the femoral artery generally, with what may be called the landmarks of the vessel. Then follows the special consideration of ligature of the vessel in various parts of its course. Under the heading of 'Ligature of the superficial femoral artery at the seat of election,' we find the following.

'*Surgical Anatomy.*—Scarpa's triangle is the most important surgical situation of the artery. It corresponds to the upper third of the thigh. The artery passes through this space from the centre of the base at Poupart's ligament to the apex or angle formed by the crossing of the sartorius over the adductor longus muscle. The apex of the triangle, the position near which the artery is most usually ligatured, is a hand's breadth or four inches below Poupart's ligament. As in some cases the profunda is given off as low as four inches, it has been recommended to tie the artery a little lower than the point indicated. The artery is now comparatively superficial, but it will be more or less covered by the sartorius according to the muscularity of the subject (figs. 86, 87).

'*Operation.*—Ligature of the superficial femoral, near the apex of Scarpa's triangle, is the proceeding generally adopted. The hip having been slightly flexed and the thigh everted, the artery will easily be reached by an incision, three inches long, in the line of the vessel (fig. 88). Its centre should correspond to the apex of the triangle, and in this position the ligature ought to be applied. Ascertain the position of the internal saphena vein, and avoid it. After dividing the skin, fascia, and fat, seek the inner border of the sartorius and draw the muscle outwards; avoid the crural branch of the genito-crural nerve, the internal cutaneous and long saphenous nerves, and the nerve to the vastus internus, which follow the line of the artery. Open the sheath of the vessel towards the outer side and thoroughly expose it by tearing through its proper sheath. This is the best way to ensure safety for the vein. The femoral vein lies behind, and somewhat internal. The anterior crural nerve is on the outer side.' (This should rather be the branches from the anterior crural, as such a trunk no longer exists.) 'Pass the needle from the inner side. The vein has occasionally been wounded in passing the aneurysm-needle, and even some of the before-mentioned nerves included. The operation is perhaps the most successful of any for ligature of a large artery. Gangrene of the limb is the after-accident most to be apprehended.'

Besides the excellent anatomical figures attached to this subject are two important diagrams showing the front and back view of a specimen in Richmond Hospital, Dublin. Both femoral arteries were tied successfully at different times, and both for popliteal aneurysm. The diagrams show well the abundant collateral circulation which was established.

We have taken the above as a fair example of the style and of the manner in which the subjects are treated. The anatomical descriptions are very good and clear, and the illustrations are remarkably good; but when it is noticed in the preface that to his colleague, Mr. Anderson, the author is indebted for a large number of the drawings, we may be sure that they will bear the impress of so skilful an artist and so thorough an anatomist. Many of them are very original, and we should have been glad to see them indicated in some manner as original for future reference in other works. In one figure (No. 53), which is taken from Henle, we notice a perpetuation of an anatomical error in the origin of the acromio-thoracic artery from the first part of the axillary. This is very rarely the case. It is given off usually from the front of the axillary artery, a short distance under the pectoralis minor, and then passes upwards to appear in the space above the muscle.

The purely surgical part of the work represents not only the author's opinions but those of the most advanced surgeons, and is free from faults of narrow-mindedness. We have examined carefully the different subjects treated in this, the first part of the work, and, critical though we would be with fairness, find our work difficult. We notice the absence of statistics, and feel relieved and are satisfied with the references made to classical cases. The author's accounts of the history of the operations is also limited, but sufficient for all practical purposes. His object has been evidently to give clear and practical directions for the student or surgeon, and he has admirably succeeded in this. References to authorities by means of foot-notes are useful chiefly to those who are compiling or writing, and with these he has not encumbered the work. We accept the directions given as those of a surgeon of large experience and of a peculiarly practical mind, and feel that we are in the presence of a sound teacher.

In the general account of ligature, which occupies the first thirty-seven pages, and which will be read with interest, we have been struck with the section which includes the operation and the points of importance to be borne in mind practically with reference to it, and also that which deals with the after-effects of the operation. They may be carefully studied, especially by the student; and, as he gains experience, he will be able to supplement the advice given by taking advantage of the special preference shown by other surgeons for instruments and materials and technical detail. He may also enhance the value of the work by extending the principle of simple colouring of the arteries, which the author has employed to a very limited extent. He may learn how to express his ideas clearly and tersely from a study of this work, and he will not fail to learn his subject thoroughly.

The printing and the general making up of the book reflect great credit upon the publishers: the cost brings it within the reach of all, and this is a matter of practical importance.

We finish this review, feeling that we have before us the beginning of a work which promises to be an important addition to our surgical text-books, and one that has been long wanted in English schools of surgery. Both author and publisher are to be congratulated upon its appearance, and we shall look forward with pleasant anticipation to the appearance of the other parts of the book.

ARTICLE 4500.

Alpine Cretinism, with Special Reference to Styria (Der Alpine Cretinismus, insbesondere in Steiermark). By DR. JULIUS KRATTER, Lecturer on Hygiene at Graz. Pp. 32. Graz: Leuschner. 1884.

DR. JULIUS KRATTER, of Graz, investigating the prevalence of cretinism in Styria, comes to somewhat different conclusions from those arrived at by Dr. Bircher, of Aarau, with regard to Switzerland. The latter found it generally associated with goître, and, as well as deaf-mutism, apparently connected with the geological formation of the districts, being especially rife on the trias (muschelkalk and meeresmolasse) and absent from the crystalline rocks, jurassic, cretaceous, and freshwater deposits. Klebs has referred both goître and cretinism to infection by the infusoria known as *naviculæ*, which he has found in the drinking-water of several districts in Bohemia, where these diseases are endemic, but certainly on insufficient evidence In Austria, the head-quarters of cretinism are the central Alpine regions of the Tyrol, Salzburg, Carinthia, and Styria; there being in the last-named province 1·5 cretins per 1,000 of the population, but very unequally distributed in the different districts.

Dr. Kratter gives in his pamphlet two maps, one of the geology and the other of the distribution of cretinism. They show a certain coincidence, but the conclusions suggested thereby are diametrically opposed to those of Dr. Bircher. Kratter finds the greatest amount of cretinism on the gneiss and granite, which Bircher found exempt. On the contrary, according to Kratter's observation, cretinism was rare on the chalk, a result incompatible with the theory of its causation by the presence of an excess of lime-salts in the water. The valleys of Styria, however, are the worst haunts of cretinism and goître. In some parishes there are forty or more cretins in every one thousand of the population; and when one reflects that for each cretin there are from five to ten goîtrous individuals, the condition of the wretched inhabitants appears appalling.

In his endeavours at an investigation of the causes of these diseases, he examined the geological, hygienic, and social conditions of the worst districts from every point of view. The air, water, soil, the dwellings of the people, their diet, habits, morals, occupations, and mode of life, as well as the family relations and evidence of heredity in the case of affected individuals, were all made the subject of careful inquiry, but with little positive results. Still, the fact is clear that a general improvement in the sanitary and social circumstances of the people has in many places been followed by the diminution, and in a few by the almost complete disappearance of the disease; and as a contribution to the study of cretinism and goître, Dr. Kratter's work (undertaken at the request of the Imperial Board of Health) is one of considerable value.

E. F. WILLOUGHBY, M.B.

ARTICLE 4501.

Les Pansements et la Mortalité. Par Professor LEON LE FORT. Paris: Germer Baillière. 1885.

IN an essay on the above subject, which constitutes Professor Le Fort's opening address in his course of clinical surgery, we find essentially a condemnation of the principles upon which he maintains that Listerism is founded, and yet a practical vindication of modern antiseptic treatment. Professor Le Fort's opportunities of studying contagion have been exceptionally large and peculiar, as he has been identified with the maternity hospitals and work. as well as with pure surgery at the Hôpitals Necker, Beaujon, Hôtel Dieu, and other large Paris hospitals. Consequently his conclusions must be looked upon with respect, and carefully considered.

After examining the results of treatment of wounds and of the puerperal state from the earlier part o this century, he concludes that a large mortality used to be looked upon as inevitable, and in part attributed to the appearance of epidemics of unknown nature, but supposed to be atmospheric. From facts observed in England in 1830, it seemed probable that actual contagion by the fingers and clothes was the cause of puerperal fever; and this idea was strengthened by the experience of Semmelweiss in a serious epidemic at Vienna in 1847. Tarnier in 1858 supported the idea of contagion, and showed that causes peculiar to hospitalism aggravated the mortality mainly due to contagion. Professor Le Fort maintains that he was himself the first to indicate clearly that contagion was the sole cause of the difference of mortality in hospital and in private practice; that the old idea of epidemics in maternity cases being atmospheric in nature was contrary to the fact; that they were all the result of contagion, and that puerperal fever, purulent infection, and erysipelas could be made to disappear by using proper precautions against contagion. Moreover, he urged in 1870, that surgical and other dressings ought to have for their object 'the destruction of germs which might be the point of departure of infection.' His theory has been and still is that of contagion-germs.

After discussing the work of Pasteur and others, he considers that we are in presence of two doctrines. The first is that of Lister, 'which applies only to recent wounds, and does not take into consideration contagion, but seeks to prevent suppuration in the destruction, by means of carbolic acid, of the fermentation-germs contained in the air.' The second is Le Fort's, 'which attributes the various purulent infections to contagion, which regards the agent of this contagion as a contagion-germ of unknown nature (but possibly a special microbe), developing primarily, if not spontaneously, under various influences in a patient who has been subjected to operation, and which emphatically requires us to guard against carrying the active principle of contagion into a wound.'

'The ideas which I hold may be summarised thus. The doctrine of M. Pasteur, so justified in its application to fermentation and putrefaction, applies to surgery, when it is used to explain alteration of normal or pathological liquids by contact with the air. This alteration of these liquids by the ferment changes can give rise to septic poisoning. Washings and injections by substances called antiseptic can, by checking the action of the ferments, prevent also the development of putrid infection. But ferments cannot create morbid entities like (pyæmia) purulent infection, erysipelas, typhoid fever, cholera, scarlatina, &c., which are characterised by a special contagion-germ transmissible in each case.'

He maintains that purulent infection occurs in two classes of cases—(1) primary, very rare, though oftener in hospital than in private practice; and (2) due to contagion, relatively more common.

He ridicules the spray, catgut, and gauze, which he looks upon as necessary parts of Listerian principles and practice; but recognises that the adoption of Listerian antiseptic dressing has been attended with a notable reduction of mortality in hospitals, and that many operations have been made much less dangerous. The sphere of activity of the surgeon has, he allows, been enlarged by it, and for patients it has been an immense boon; 'but, in trying to oppose the fermentation-germ, the dressing of Lister has opposed the contagion-germ.' The good results are, he considers, due to the principles he has himself adopted for a long time as a consequence of his belief in contagion-germs: extreme care in surgical work, the washing of the hands and instruments in a strongly antiseptic solution, which destroys the contagion-germs as well as the ferment-germs. He also points to the good effect obtained by the equal pressure obtained by the dressing and the rational employment of drainage, which Lister more than any other surgeon has nsisted upon.

He gives directions, finally, for the dressing of wounds; but this must vary a good deal according to circumstances. The object aimed at is to get primary union, and the dressing must therefore provide for exact adaptation and rest. As in very recent wounds there is an excess of plastic exudation, this must be provided with a possibility of drainage, and he refers to the importance of Lister's work in this respect. Similarly, a strong solution of carbolic acid (as recommended and used by Lister) is the best solution for washing the wound with. The dressing ought not to be removed until primary union has taken place—*i.e.* five or six days, unless complications arise. It should not be very moist. Strapping, and cotton-wool for equalising the pressure, he thinks generally to be preferred. For inflamed wounds he recommends wet dressings, with spirit and water or weak solution of bichloride of mercury, covered with some impermeable tissue. When a wound suppurates, and is slow to heal, the dressing with bandages and 'occlusion' is often useful. Indolent wounds are to be touched with a weak solution of iodine, or, better still, a dressing of storax.

Similar directions are given for the dressing of amputation wounds; and with reference to the treatment of erysipelas, he urges that incisions should not be made, and the various causes of erysipelas should be avoided. These he enumerates, as the irritation of a badly fitting dressing or bandage, exposure to a current of air, irritating fluids or dressings, unnecessary probing of a wound, plaster applied to a recent wound, and not poultices freshly prepared. He allows, too, that the air may be the vehicle of the contagion-germ. The dressings in pyæmia follow very much the same rule with the author as in cases of erysipelas.

Finally, he gives tables of the mortality after amputation of the thigh and leg in the Paris hospitals in the years 1868 and 1869, as compared with 1882 and 1883, with the following striking result. In 1868 the deaths were 41 to 35 recoveries; in 1862 the deaths were 56 to 17 recoveries. Since the introduction of Listerian precautions, the deaths in 1882 were 28 against 41 recoveries; in 1883 the deaths were 29 against 43 recoveries. These statistics do not include Professor Le Fort's, which are given separately; and as he has adopted the same treatment throughout, he does not specially contrast the similar periods, and his results are 16 deaths to 45 recoveries.

Professor Le Fort's results are very satisfactory; and as they are obtained from the adoption of the same treatment which Lister, we believe, uses to a great extent, the practical outcome of what the former looks upon as essentially different theories is the same. W. W. WAGSTAFFE.

ARTICLE 4502.

Clinical Lectures on Scrofulous Neck and on the Surgery of Scrofulous Glands. By T. CLIFFORD ALLBUTT, M.D., F.R.S., and T. PRIDGIN TEALE, M.B., F.R.C.S. Pp. 32. London: J. & A. Churchill. 1885.

WE gladly welcome the publication of these two lectures, which put before us in a very practical fashion the sum of Dr. Allbutt's and Mr. Teale's experience in their rational and scientific treatment of scrofulous glands.

Dr. Allbutt, by his felicitous mode of expressing his views, lends great weight to the popular belief that scrofula in many cases is the forerunner of phthisis, without committing himself to the assertion that their causation is identical. And yet few pathologists, we imagine, would refuse at the present day to subscribe to the view strongly held by many German writers—namely, that scrofulous and tubercular lesions are simply phases of the same disease, and vary because the stage which it has reached differs according to the situation of the tissue attacked on the one hand, and to the powers of resistance possessed by the patient on the other.

On this latter point we feel inclined to join issue with Dr. Allbutt, since, unless we misunderstand him, he believes that the peripheral irritation which determines the initial changes in the glands may be of a simple non-specific character. It seems to us that, even without insisting on a thorough-going adoption of the bacillary parasitic theory of the causation of phthisis, it must be generally admitted nowadays that the tubercular lesion is truly specific, and that, as an inevitable consequence, we can scarcely agree to the possibility of its causation having a simple origin. Towards whichever side a surgeon may lean, he always by his treatment shows that he feels he has to do with active local mischief, possessing the potentiality of commencing the destructive lesions of phthisis. Mr. Teale has formulated very clearly the way in which this danger may be averted, by sweeping away every focus of disease as it develops. In short, his method, which we have ourselves proved to be most efficacious, consists simply in the thorough extirpation by knife and sharp spoon of every diseased gland that can be got at, removal of all thinned and diseased skin, and accurate co-aptation of the edges of the wound with fine sutures, after adequate drainage has been provided for. There is one point which we do not notice specially mentioned, and yet is of immense importance in dealing with the delicate tissues of strumous patients. It is simply the extreme value of treating the wound strictly antiseptically, in those cases in which the skin has not previously given way, and so arranging the dressing that it may remain undisturbed until the healing is completed. One practical point is justly emphasised by Mr. Teale; that, after one suppurating gland has been thoroughly scraped out, careful search must be made for any small opening of communication with another gland similarly caseated and discharging. The hole is so often extremely small that, as Mr. Teale points out, it may easily be overlooked. No mention is made of concomitant tonic treatment, but we imagine that in all the cases quoted at the end of the second lecture, and which illustrate in a very brilliant fashion the efficacy of the treatment just described, some general treatment was adopted as an adjunct of considerable power. In conclusion, we must again express our hearty appreciation of the energetic and original spirit with which the Leeds School of Medicine and Surgery of the present day is rivalling its brilliant records of the past.

ARTICLE 4503.

Holiday Number of the London Medical Record, London: Smith, Elder, & Co. June 1, 1885.

THE annual holiday number of the RECORD contains, in addition to the usual information, several interesting communications from the pens of distinguished physicians. Dr. George Thin contributes a paper on 'Summer Holidays at Sea,' in which, as an authority on seafaring experiences, he dispels the illusion that the horrors of a channel steamer exist in a magnified scale on board a well-appointed ocean passenger-vessel, and demonstrates the beneficial effects of a sea-voyage on an overworked constitution. Dr. Hermann Weber gives his opinion on the merits of continental marine and inland climatic resorts in summer; whilst Inspector-General Macpherson has undertaken the department devoted to the mineral waters of the United Kingdom. The ill-success of the majority of British spas is no doubt mostly due to two facts; firstly, the inferiority of the British caterer, victualler, and landlady as suppliers of good amusements and good cooking at reasonable prices; and, secondly, the morbid fear of 'mixed' society which the 'respectable English family' never drops—until it crosses the British Channel. Dr. Symes Thompson writes on 'The Choice of English Health-Resorts,' Dr. Parsons on 'Sea-Bathing,' and Dr. Burney Yeo on 'Pyrenean and Adjacent Summer Health-Resorts.' One of the most useful of these original communications is Dr. Vintras' graphic article on 'Seaside Resorts on the French Coast,' from Dunkirk to Caen. Each watering-place is described at considerable length, and besides Boulogne, Dieppe, Etretat, Trouville, and other well-known places, Dr. Vintras gives full information of some more sequestered localities, hardly, if at all, known to the British tourist. These are Le Crotoy, Veules, the two Saint-Valérys (concerning which some confusion exists in the pages of the daily press), Villerville, Villers-sur-Mer, Houlgate, Beuzeval, and Dives. On the same plan as in this article, other health-resorts are described in full in the remainder of the *Holiday Number.* We believe that this publication is a great improvement upon more familiar medical and medico-popular writings on the same subject, where details are written in a broken style, as though in a catalogue, and good literary descriptions of places, the only possible way of conveying to the reader any idea of places which he has never visited, are entirely wanting.

ARTICLE 4504.

On a New Method of Recording the Motions of the Soft Palate. By HARRISON ALLEN, M.D. Philadelphia: P. Blakiston, Son, & Co. 1884.

BY means of a rod passed through the nose into the naso-pharynx, and tilted so that the pharyngeal end comes into contact with the soft palate when the latter is raised, the various movements of the palate may be investigated, being traced on carbonised paper placed on a Ludwig's kymographion. It is then found that movements expressed by the terms exhaling, coughing, hawking, sniffing, present tracings sufficiently distinct and characteristic, and which show the fact that the palate is raised, the length of time during which it remains elevated, and the duration of its ascent and descent. The author has also investigated at some length the curves formed in articulating vowels, consonants, syllables, words, and test phrases; and these seem to be, within certain limits, constant. It appears probable that the instrument may be used to study the times at which the different motions of the palate in phonation come into play. Thus the word 'mamma' gives one of the simplest curves, and is one of the first words acquired by the infant. 'Papa,' a word acquired much later, has also a much more complex curve. The author thinks that the instrument may prove of value in investigating the mechanism of the soft palate in disease, in studying stammering, and in determining the degree of degeneration of the levator palati muscles in progressive dry aural catarrh.

BERTRAM C. A. WINDLE, M.D.

ARTICLE 4505.

The Nomenclature of Disease, drawn up by a Joint Committee appointed by the Royal College of Physicians of London. Second Edition, being the First Revision. London: Harrison & Sons. 1885.

THE first edition of this well-known work appeared in 1869, and was sent to each known practitioner in the United Kingdom, in order to secure a more uniform and more precise registration of the causes of death, and so enable the Registrar-General to render, year by year, those valuable statistics which are looked forward to by many with great interest. Since 1869 great changes have taken place in our knowledge of morbid processes, and consequently corresponding changes have had to be made in terminology; many names familiar in years past have dropped out of use, and others have been substituted. The difficulty of the task the committee set itself to accomplish—viz., 'the perfecting the statistical registration of diseases,' was great, and in the *Lancet*, April

1885, p. 638, Dr. W. Ainslie Hollis has indicated several omissions and commissions; still, with a committee formed as it was by many of our ablest men, Dr. Wm. Ord acting as secretary, we may be sure the task has been well done, if not yet perfectly accomplished. To attempt a detailed analysis of such a work is impossible, and as it is, or will be, in the hands of each practitioner, we would urge that it be carefully studied and its teachings followed, so that accuracy in the description and in the registration of disease may be secured.

RICHARD NEALE, M.D.

ARTICLE 4506.

On Insanity Alternating with Spasmodic Asthma. By CONOLLY NORMAN, F.R.C.S.I. Reprinted from *The Journal of Mental Science*, April 1885.

THE interesting subject dealt with in this paper is surprisingly little touched on in medical literature. Dr. Kelp published a case in 1872 (*Zeitschrift für Psych.*, Band xxix., Heft 4), in which insanity alternated with asthma. In the discussion on the paper Dr. Lorent, of Bremen, mentioned a similar case. Dr. Savage, in his recent *Clinical Manual*, records other cases. With these exceptions, the author can find no reference to the subject elsewhere. Dr. Kelp had likewise been unable to discover any mention of similar cases; and the case he published was the only one he had witnessed during twenty years' work at the Oldenburg Asylum.

This paucity of literature Mr. Norman considers strange; for, in his experience, the condition is not extremely rare. He relates seven well marked cases that have come under his own observation. In view of this circumstance, a few of the author's remarks may be quoted.

All the cases 'show a marked alternation of mental and pulmonary symptoms. Thus, in the first case we have chronic asthma vanishing when insanity comes on, and reappearing when the mental trouble becomes chronic. In the second, asthma cuts short and takes the place of an attack of insanity. In the third, perhaps the most remarkable and interesting of the series, habitual asthma disappearing, its place is rapidly taken by insanity, which, again, disappears immediately on the return of the asthma. When the last change occurred, the patient was under close observation in an asylum, so that there can be no doubt as to the sequence of events. . . . In the fourth case, chronic asthma occurring in an imbecile ceases with an acute attack of insanity and comes on again when the latter has passed off. In the fifth, the same order of things is observed as in the third. In the sixth, chronic asthma lessens in severity, and finally disappears with the oncome of insanity: when the mental defect becomes chronic with some degree of amelioration, asthma returns.

'Analysing the mental symptoms in each case, it will be observed that the first and the seventh presented the character of acute melancholia, though the former has become chronic in its course. The fourth was a case of acute mania, occurring in a person of originally feeble mind, and followed by an increase of feebleness. The four other cases all exhibited the characteristics of chronic degenerative mental disease rather than of acute insanity, and this is the more remarkable as they were mostly acute in their course. The significance of delusions of persecution, tending to be organised, it is needless to point out, but it may be necessary to note that impulses and imperative conceptions such as those found in the third case are almost unknown as symptoms of an acute primary neurosis. Krafft-Ebing, who has given much attention to this subject, classes imperative conceptions among the signs of mental degeneration. They are found in persons exhausted by sexual excess, or burdened with the load of strong hereditary neurotic taint.

'The cases recounted by Dr. Savage and Dr. Kelp similarly bear the impress of a chronic incurable malady, though two out of the four noted by the former observer recovered, as did the single case recorded by the latter.'

The theories as to the nature of asthma, are classified under three heads according as the disease is referred, (*a*) to spasm of the bronchial muscles; (*b*) to tonic spasm of the diaphragm; or (*c*) to tumefaction of the bronchial mucous membrane from dilatation of the blood-vessels through vaso-motor influence; though, perhaps, all three agencies are at work.

The alternation of insanity with various other affections is noted; as, for example, gout, rheumatism, and intermittent fever. In lung-diseases especially has this alternation been observed; and Clouston has described a special form of insanity with phthisis, characterised chiefly by monomania of suspicion and tendency to refuse food.

Mr. Norman's paper is a valuable clinical study.

WILLIAM R. HUGGARD, M.D.

ARTICLE 4507.

The Distribution of Tuberculosis in Germany, and some of its Causes (Die Verbreitung der Tuberculose in Deutschland und einige ihrer Ursachen). By DR. SCHLOCKOW, of Breslau. *Zeitschr. der Königl. Preuss. Stat. Bureau*, 1883, Heft 3, 4.

DR. SCHLOCKOW, in endeavouring to determine the causes of the known greater prevalence of tubercular phthisis in the western than in the eastern provinces of Germany, and of Prussia in particular, passes in review the labours of others in this department of public health. The earliest observations were those of John Simon in 1858, that the mortality from consumption varied in different parts of England from 134 to 445 per 100,000 inhabitants; whence it appeared that local conditions, and especially the different circumstances of the agricultural and manufacturing classes, must be held to exert the greatest influence.

Next came the well-known inquiry of Dr. George Buchanan into the influence of soil, as regards its dampness or otherwise, confirmed in nearly every result by that of Dr. Bowditch in America. Corral remarked that in Baden the prevalence of phthisis diminished as the elevation increased, a conclusion not confirmed by Küchenmeister, who considered it to depend mainly on the employments of the people, and on residence in town or country. Dr. Müller, of Winterthur, dividing the population into the three classes of agricultural, industrial, and mixed, found for each that the frequency of phthisis diminished as the elevation of the places increased, though in no regular proportion.

Dr. Schlockow, taking the populations of 147 German towns, with over 15,000 inhabitants, from the census of 1875, and the official statistics of the years 1876-9 inclusive, found that the mean mortality from tuberculosis was 360 in every 100,000 living. Among the lowest death-rates were those of Reutlingen 140, Weimar 162, Rostock 180, Schwerin 210, Coburg 213; and among the highest (to mention only those more familiar to English readers) Erlangen 533, Würzburg 555, and Solingen 662; but the very highest was Reinscheid, with 878.

The high mortality in the towns of the Lower Rhine provinces is remarkable; in several of these, however, various industries are carried on in close ill-ventilated rooms. Elevation did not appear to exert any influence, but the effect of density of population was more apparent.

In the kingdom of Prussia, the mean mortality from tubercular disease was 313 per 10,000 living, 371 in the urban, and 284 in the rural districts; and, as regards sex, 347 males, and 281 females.

The difference in the mortality from tuberculosis, between the eastern and western provinces, was even more marked than it was in the empire generally. Every province (*Bezirk*), in which the death-rate was below the mean of 313 belonged to the former, and those in which it was above that to the latter, the difference being maintained at every age and period of life. Thus, to take ten examples from each half of the kingdom, the numbers were these.

Eastern Provinces.		Western Provinces.	
Marienwerder	161	Schleswig	322
Königsberg	174	Triers (Treves)	355
Danzig	174	Wiesbaden	398
Posen	230	Hanover	399
Stettin	239	Aachen (Aix-la-Chapelle)	402
Potsdam	253	Koblenz	433
Frankfort	254	Minden	471
Erfurt	270	Köln (Cologne)	511
Magdeburg	279	Münster	517
Breslau	307	Düsseldorf	529

Coming to the smaller districts (*Kreise*), the contrasts are still more striking. In the eastern rural districts the mortality was often as low as 102, 112, &c., and in some of the western over 600.

It might be imagined that these enormous differences were explicable by erroneous registration, and that in the Polish provinces, where the people are more ignorant, many deaths really due to tuberculosis were reported under some other names, were it not that the returns of the workmen's benefit societies, based exclusively on medical certificates, fully confirm them; the tubercular mortality in the province of Saarbruck being actually 3½ times as high as that of Upper Silesia, though the populations of these provinces are alike largely engaged in coal-mining.

Nor can any influence be ascribed to racial characters, for the Germans in the east enjoy equal immunity with the Slavs.

Density of population, indeed, implies a degree of overcrowding and unfavourable sanitary conditions, and suffices to explain differences between places otherwise similarly circumstanced; but the contrast between the eastern and western provinces cannot be thus accounted for. It is well known that in Posen and Silesia the social condition of the people as regards poverty, bad dwellings, poor diet, and want of cleanliness, is far worse than in the central and western provinces, and that typhus, relapsing fever, and other diseases associated with want and hardship, are far more prevalent than elsewhere. In the industrial districts and the thickly-peopled manufacturing towns, the mortality among men is higher than among women, whereas the reverse is the case in the thinly populated and purely agricultural districts of North-west Germany, as Lüneberg, Stade, Osnaburg, Münster, Minden, &c., in all of which the total death-rate is high.

The inquiry, though leading to no positive results, is a remarkable one, and highly suggestive. In all such problems, it is not less necessary to refute popular notions and to exclude conceivable causes than it is to discover the actual ones, and such destructive processes must precede the labour of reconstruction of working hypotheses.

E. F. Willoughby, M.B.

Article 4508.

The Essentials of Histology, Descriptive and Practical, for the Use of Students. By E. A. Schäfer, F.R.S., Jodrell Professor of Physiology in University College, London. London: Longmans, Green, & Co. 1885.

Not only does Professor Schäfer hold a foremost rank among histologists, but he has had a prolonged experience as a teacher and lecturer; this combination of knowledge and experience is in itself a strong presumption in favour of the practical value of this book, and a careful examination of its contents will show that it fulfils the high expectations formed. To suit the needs of a class of medical students, the work is divided into forty-two lessons, each calculated to occupy a class for two or three hours. Prefixed to each lesson are a few clear, succinct directions for making preparations of the tissues or organs to be examined; then follows a connected descriptive account. The directions and descriptions are so clear that a solitary student could follow them without difficulty, and the illustrations are so numerous and excellent as to diminish very much the need of the services of a demonstrator. The concluding lessons on the brain and spinal cord, the eye and ear, call for an amount of leisure and technical skill which few students can command, but they make the book complete, and will afford useful guidance to any advanced student who wishes to give attention to these subjects. Of a work where many delicate woodcuts are introduced, it will not be out of place to say that the paper is sufficiently thick and opaque to prevent confusion from arising on this score.

NOTES ON BOOKS.

Article 4509.

Hay-Fever: Its Etiology and Treatment, with an Appendix on Rose Cold. By Morell Mackenzie, M.D.Lond. Third Edition. London: J. & A. Churchill. 1885.

Dr. Mackenzie has added to a revised edition of his lecture on 'Hay-Fever,' reprinted from the *British Medical Journal*, a short appendix on 'Rose Cold,' a curious affection closely resembling hay-fever, but excited only by the odour of roses. The extensive use of the cautery, the wire snare, or of caustics to remove a structural alteration of the nasal mucous membrane, is condemned, though, perhaps, hardly with sufficient vehemence. A spray of cucain (4 per cent.) is recommended as a prophylactic, and the application of a stronger solution

(20 per cent.), with a brush in a developed attack. Ten to fifteen grains of pure salicylic acid, used as a snuff, during the day, is mentioned as a remedy of doubtful value; Ferrier's snuff, and a snuff containing morphia gr. $\frac{1}{16}$th, and bismuth (? carbonate), gr. 1, are spoken of more favourably.

ARTICLE 4510.

Dr. G. Beck's Therapeutischer Almanack. Pp. 82. Berne: Schmid, Franke, & Co. 1885.

FORMING the third part of the fourth volume of Dr. G. Beck's 'Manual of the most Modern Therapeutics' (*Taschenbuch der neuesten Therapie*), this book treats in an abbreviated, but at the same time in a most complete form, medical and surgical treatment, remedies, and their mode of preparation, surgical appliances, and literary references on the special subjects. None of the most modern remedies are omitted, *e.g.* cucain, helenine, quebracho, kefyr, &c. An alphabetic index is added to this modest volume, the contents of which present *multum in parvo.* FERD. AD. JUNKER, M.D.

ARTICLE 4511.

A Manual of Health Science: adapted for use in Schools and Colleges, and suited to the requirements of Students preparing for the Examination in Hygiene of the Science and Art Department, &c. By ANDREW WILSON, F.R.S.E., F.L.S. London: Longmans. 1885.

WRITTEN in an agreeable style and addressed to a popular or juvenile public, this work contains a series of short elementary disquisitions on physiology, hygiene, and ambulance work. Scattered through its pages is also much useful miscellaneous information. It appears to be free from serious faults.

ARTICLE 4512.

Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Comprising Lists of the Papers read during 1884 before Societies engaged in Fourteen Departments of Research, with the names of their authors. Second annual issue. Pp. 231. London: Charles Griffin & Co. 1885.

WE do not know that we can better explain the object and scope of this excellent work than by referring the inquirer to the title-page. If there be one thing more than another at which scientific workers sigh and groan, it is the lack of information as to what former and contemporary investigators have done and are doing in the same direction, so far as their labours are reflected in the published Transactions of Societies. Here is a book that will help them; though, being sometimes a little behind the time, it will not altogether solve their difficulties. The aim of the work is defined to be (1) an account of the scientific work done in the various departments throughout the year; (2) a record of progress; and (3) a convenient handbook of reference. This programme is modest, and, so far as the volume before us goes, is well fulfilled.

READERS of *Punch* will remember the big St. Bernard dog which used to figure in all Du Maurier's pictures. This noble animal, 'Chang' by name, died in 1883, and his skeleton has recently been presented to the Royal College of Surgeons, in whose museum it will henceforth be a prominent feature.

NEW PREPARATIONS.

ARTICLE 4513.

GLYCERINE AND CODEIA JELLY.

THIS preparation has been introduced for the treatment of the cough of phthisis. It is a very useful combination, and in several cases in which we have given it a trial it has succeeded admirably. It is pleasantly flavoured with lemon and citric acid, and most patients like it. The dose is from half to a teaspoonful when the cough is troublesome. We notice that the strength of the preparation is not stated on the label, but we presume the manufacturers would have no objection to give the exact composition. It is made by Messrs. Ferris, Boorne, Townsend, & Boucher, of Bristol.

ARTICLE 4514.

'THE LEICESTER' POROUS BELLADONNA PLASTER.

THIS plaster, spread on scarlet felt, is excellent. We have given it an extensive trial, extending over a period of nearly six months, and have every reason to be satisfied with it. It is very active, adheres firmly, can be worn without discomfort for many weeks, and, from being porous, gives rise to little irritation. It is the best belladonna plaster we have seen for a very long time. It is prepared by A. De St. Dalmas, of Leicester.

ARTICLE 4515.

CUCAINE TABLOIDS.

THE tabloids of cucaine, recently introduced by Messrs. Burroughs, Wellcome, & Co., Snow Hill Buildings, E.C., constitute an admirable method of administering a valuable anæsthetic. The difficulty long experienced has been to obtain a neutral solution, which could be kept indefinitely without fear of the formation of fungus. That several accidents have occurred from the use of improperly prepared solutions, is well known. Clearly the best and most reliable preparation is one that can be made extemporaneously for immediate use. These tabloids, if dissolved in water, may be employed hypodermically without the slightest fear of any irritation being set up at the point of injection. If introduced into the eye they cause complete anæsthesia, so that operations may be performed without the employment of a general anæsthetic. Applied to the mucous membrane of the nostrils, they prevent that excessive irritability which is the constant accompaniment of hay fever, and afford immediate relief from all the symptoms. They contain one-sixth of a grain of the hydrochlorate of cucaine in each, and are free from toxic properties.

ARTICLE 4516.

PEPTO-FER (JAILLET).

THIS preparation is supposed to contain a newly-discovered salt, 'chloro-peptonate of iron.' It is stated in the prospectus which accompanies it that it is 'not an *American quack* medicine.' It is recommended as 'a digestive and tonic,' to be taken 'as a liqueur after meals,' and we are told that we must 'beware of imitations.' The notes 'On the Chemical Physiological and Therapeutical Study of Chloro-Peptonate of Iron,' by Dr. Jaillet, are pretentious, but we do not know that they afford any real information. The preparation is palatable, and we have no doubt that it is a very good one; but the proprietors must learn that in this country medical men are quite capable of forming an independent opinion, and that a medicine, whether good or bad, must rest on its own merits. We shall probably have more to say on the subject after a longer trial. The agents for 'Pepto-Fer' are Messrs. Vane Stow, of Ludgate Hill, E.C.

ARTICLE 4517.

BUFFALO LITHIA WATER.

THE value of lithia as a solvent for uric acid is so well known, that any special preparation of it is likely to be received with considerable favour. We have a pharmacopœial solution containing 10 grains of the carbonate to the pint, but it cannot be said that we are too well off for natural waters in which this salt is the active ingredient. The Buffalo Lithia Water contains in Spring No. 2 about 2¼ grains to the imperial gallon—a large proportion. There can be no doubt that it should prove a valuable addition to our means of treating gout, uric acid calculi, and other allied conditions. The water can be obtained in this country from Messrs. Ingram & Royle, of Farringdon Street, E.C., and Liverpool and Bristol.

ARTICLE 4518.

CONDY'S HYPOSULPHATE OF SODA.

THIS is a new salt prepared by a new process. It is a crystalline substance resembling in general appearance sulphate of magnesia. It is soluble in water, and possesses purgative properties. The dose is from half an ounce to an ounce, dissolved in hot water and allowed to stand until it is lukewarm. It has an agreeable taste, a point of considerable importance. Our trials with it are as yet incomplete, but we are inclined to think that it will prove a useful addition to our list of purgative medicines. We hope to report more fully after a longer trial. The inventor is Mr. H. Bolman Condy, of Battersea, well known as the patentee of Condy's Fluid.

NEW FRENCH INVENTIONS.

ARTICLE 4519.

D'ARSONVAL'S CALORIMETER.

M. D'ARSONVAL has invented a calorimeter for estimating diffused heat, which enable researches to be made on man. His instrument consists of a cylinder filled with air and hermetically closed, which, by means of a tube, is in communication with a manometer and a second cylinder with double walls, that is really the calorimeter. The person who constitutes the subject of research is placed in the cylinder, of which the lower end is open; it is suspended from a stout pole or from the ceiling, and is kept *in equilibrio* by a weight attached to it. When the instrument is in action, its base rests on a foot with a groove marked on it filled with glycerine, thus the cylinder is hermetically closed. A pipe measuring from 6 to 8 centimètres in diameter runs underneath the foot and extends beyond it; the second branch of the manometer above-mentioned communicates with the interior of the double wall. Ventilation is effected by the suction of the pipe. In order that this shall draw in a constant draught of air, a gas-jet is constantly alight in its interior. The outer air enters from the upper part of the calorimeter. Ventilation is thus carried on from upwards downwards. The temperature is therefore kept at an uniform level. The source of heat which is placed in the calorimeter causes the air in the chamber formed by the double walls to expand. The height marked by the fluid in the manometer varies, but, as the second branch is in communication with the first closed cylinder, it is not necessary to make the corrections which rectify the existing differences between the outer temperature and barometric pressure. This calorimeter may be described as an air-thermometer, in which is placed the source of heat to be studied in its variations, or as a Leslie's thermometer, for it is equally accurate in estimating almost imperceptible phenomena. The apparatus is easily graduated, either by burning inside it a jet of pure hydrogen producing a known degree of heat, or by passing through it a current of vapour at 100° C. (212° Fahr.); the indications of the manometer are then observed. When it is required to register on a blackened cylinder the behaviour of the heat emitted during an experiment, a metal capsule closed at the top by an India-rubber diaphragm, is attached to the two ends of the manometer, the two diaphragms are connected by a transverse rod to which is fixed a lever, the extremity of which rests on the registering cylinder. When a difference of pressure occurs, one of the diaphragms is raised, and thereby obliges the lever to describe a curve.

ARTICLE 4520.

A NEW INSTRUMENT FOR ADMINISTERING CHLOROFORM.

M. BERT, at a recent meeting of the Académie des Sciences, showed an instrument, invented by M. Dubois, which renders his method of administering chloroform and air both easy and accurate, and thus removes the disadvantages that previously attended the administration. It consists of a cylinder capable of containing twenty litres, open at both extremities. A piston is placed at the lower extremity, into which is poured the chloroform. The quantity is invariably the same, the dose being regulated by a small cup. Respiration continues calm and natural, and anæsthesia can be prolonged during two, three, and even four hours, without the patient suffering the least annoyance. A mixture of ten grammes of chloroform with 100 litres of air produces anæsthesia, and six grammes are necessary to maintain the condition. The cup can be charged according to the dose administered. Hospital practice has proved M. Dubois' instrument to be of great utility. It is strongly recommended by M. Thiriar of Louvain.

ARTICLE 4521.

SELF-REGULATING WARM STAGE FOR THE MICROSCOPE.

AT a recent meeting of the Biological Society of Paris, M. Vignal presented a self-regulating warm stage to be used for microscopic work. It is small, works easily, is certain in its results, and maintains an unvarying temperature. M. Vignal described this instrument as a modification of M. D'Arsonval's constant temperature stove. It consists of a rectangular copper box, with double sides. The space limited by the inner wall constitutes the hot-air chamber. The right side of this chamber is removed in order to be able to place and handle the glass on which is placed the preparation to be examined. On one side is the regulator, which is D'Arsonval's India-rubber diaphragm. On the upper part of the instrument there are two small tubes. Through one of them water is introduced; and in the other a glass tube is fixed, along which the water rises and falls, determining the pressure, which acts on the India-rubber diaphragm. A thermometer is passed through a small opening in front of the instrument, and is placed in the chamber containing the preparation. An opening from upwards downwards is made in the stove, which allows the lens to reach the preparation and also the light to penetrate. In order to prevent draughts, this aperture is closed at the inferior extremity by a glass disc. A small sliding-door can be brought almost into contact with the preparation, in order to prevent loss of heat in the hot-air chamber. In front of the stove there is a cylindrical diverticulum, or side process, similar to those of funnels for filtering hot fluids. A small gas-jet heats the side process, and is protected by a small glass cylinder, which not only prevents the gas from being extinguished by draughts, but utilises the heat it produces. This instrument has been tested, and submitted to different conditions. The temperature of the hot-air chamber has never varied more than one or two-tenths of a degree (centigrade) when the surrounding temperature was suddenly modified by opening a window close to the instrument, or by placing it near a source of heat. In a short time equilibrium was restored. As this warm stage continues in working order indefinitely, without personal superintendence, it is specially adapted for the microscopic study of artificial cultivations of micro-organisms.

Article 4522.

DR. FAUCHER'S FEEDING-TUBE.

Dr. Faucher has presented to the *Académie de Médecine* an improved model of his feeding-tube, and declares that his original invention has not been improved by the numerous modifications it has undergone from other hands. He asserts that those made by Dr. Débove and M. Audhoui were deteriorations rather than ameliorations. The feeding-tube in its present form realises the perfection its inventor tried to attain in the original instrument, but failed. Further study has obtained success.

Article 4523.

A NEW STETHOSCOPE.

M. Gavoy has invented a *Stéthoscope Amplificateur Cardiographe*. It consists of a small bell-shaped box with resounding walls; the lower extremity is open, and a diaphragm is fixed on it; at the top of the bell is an India-rubber tube; the small bell-shaped box serves as a metallic sounding-board. It is attached by its apex inside to another much larger bell, which collects the sound-waves. The diaphragm and walls of the free sounding-board serve as condensers of the sound-waves. This instrument is also a cardiograph and sphygmograph, as well as a stethoscope.

Article 4524.

AN ASPIRATOR FOR CATARACT.

M. Redard has invented an instrument '*pour l'aspiration des cataractes molles et traumatiques.*' It consists of a flat metal cannula. Its aperture is larger than that of Bowman's instrument. The cannula is fixed on to a glass tube, and can be removed and replaced by a pointed cannula or one terminating in a perforated capsule. An India-rubber tube is fixed on to the glass one, which terminates in a small mouthpiece to be placed in the mouth of the operator. A small safety-valve placed in the India-rubber tube allows the aspiration process to be unimpeded, and prevents the return of air to the instrument. This instrument is easily cleaned.

Article 4525.

AN ELASTIC RESPIRATOR.

Dr. Basile Féris has invented an elastic respirator, to be used in pulmonary emphysema. This apparatus must be placed in such a manner that it rests on the vertebral column, and works on a level with the second intercostal space. It relieves chronic dyspnœa, and is useful in the acute form; in excessively severe cases it is of little use.

Article 4526.

DR. GAVOY'S CEREBRAL KINESIOMETER.

Dr. Gavoy's cerebral 'kinesiometer' is intended to measure the amplitude of the movements of the brain in different positions determined by the influence of special gravity. It consists of a graduated semicircle; in its centre a needle is fixed on to the axis of a small wheel; this semicircle is fixed on to a thin supple band, which serves as a spring, and is bent back at both extremities, which are traversed by tin screws. A steel rod moves round a horizontal axis received in a groove made in the band; the steel rod can be lengthened or shortened. In order to use this instrument the subject must be put on his back; a small piece of the cranium is removed, about a centimètre in diameter. The spatula-shaped end of the steel rod is passed through the hole made and enters the brain; an assistant holds each extremity of the thin band, and the screws at the two extremities of the band are made to penetrate the cranium. The subject is then placed in a different position, and the cerebral substance carries along with it the spatula end of the steel rod, which points to the degrees marked on the semicircle. Five degrees correspond to a difference of a millimètre in position.

Article 4527.

DR. GAVOY'S CEREBROTOME.

Dr. Gavoy has invented a cerebrotome, which consists of a rectangular plate thirty centimètres long. At each of the four angles is a vice. This plate supports two smaller ones, interjointed; in the centre of each of these smaller plates there is an elliptical opening; the space between them is equal to the thickness of the blade of the cerebrotome. The blade or knife slides across this space from forwards backwards, and slices the brain placed in the elliptical opening. The two plates can be raised by means of four micrometric vices, when the sections are required to be thicker. In the middle of the rectangular plate, an unpolished elliptical sheet of glass serves to support the brain to be studied ; this sheet of glass is encircled by a ring with copper teeth, and is sunk in the wood, but is movable. A portion of fresh brain is placed on a compress, the compress rests on the unpolished glass, and is carefully spread out, and is kept in place by the dentated ring. As the brain adheres to the compress it is also kept firmly in place ; the interlocked plates are put in position, and the knife is made to slide from forwards backwards in the space existing between the two interlocked plates ; the cerebrotome is then turned upside down, the portion of brain not cut into sections falls, and the section is exposed to view.

ARTICLE 4528.

INSTRUMENT FOR MICROSCOPIC PHOTOGRAPHY.

M. VIALLANES has invented an instrument for microscopic photography. It has been constructed by M. Dumaige, and consists of two independent parts, the photographic microscope and the dark chamber. The tube is much larger than that of an ordinary microscope, which allows the image reproduced on the unpolished glass to extend over a larger area than the human vision can realise when looking through an ordinary microscope. This is an indispensable condition, when not only the details of a preparation must be photographed, but also the *ensemble*. The long tube is closed at the top by a piece of metal, on which an ordinary ocular lens can be placed in a horizontal position. The dark chamber, similar to that used by photographers, moves along horizontally on a slide ; underneath the slab that supports the preparation an Abbé's condenser is placed. An incandescent electric lamp is substituted for the glass of the condenser ; it is silvered on both sides, and, by means of a very simple arrangement, can be used as required.

MISCELLANY.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will hold its fourteenth meeting at Grenoble on Aug. 13, 1885. M. Verneuil will act as president.

DR. VON BAMBERGER, Professor of Special Pathology and Therapeutics in the University of Vienna, and Superintendent of the second Medical Clinic, has been elected Rector Magnificus of the University.

STATUE OF BOUILLAUD.—The statue erected to the memory of Dr. Bouillaud was unveiled at Angoulême Saturday, May 16. The Mayor of Charente received the delegates from the different scientific and learned bodies. M. Vulpian represented the Institute of Arts and Sciences, M. Laboulbène the Paris Medical Faculty, M. Henri Roger the Académie de Médecine ; M. Verneuil, M. Potain, and M. Cornil, professors at the Paris Medical Faculty, were also present.

MEASLES IN TIERRA DEL FUEGO.—Dr. Hyades has received news from Tierra del Fuego that an epidemic of measles has broken out. This occurred immediately after the arrival of an Argentine Commission. The population is reduced to one half of what it was last June. According to the census returns it then reached one thousand. More men have fell victims to the epidemic than women. It has been especially violent in the territory adjacent to that occupied by the Commission. Orange Bay has been exempt from the epidemic, also Cape Horn.

M. LUYS has presented to the Académie de Médecine in his name, and in that of Madame Vasilicos and M. Descourtes, a plaster model made by them of a human brain. It is nearly four times larger than the natural dimensions ; nevertheless, an exact reproduction of a human brain, being enlarged from an impression taken from one. It is the first time such a model has been made in France. At the Anthropological Society there is a plaster model of a human brain made according to the directions of Broca, which is the synthesis of different cerebral regions copied from many subjects.

PREVENTIVE AGAINST YELLOW FEVER.—In the *Rio News*, April 5, 1885, Dr. Freire states that he has practised inoculation in Rio de Janeiro as a preventive against yellow fever in over 1,100 persons. In each case (with the exception of one or two) the temperature rose during the first forty-eight hours from 1½ to 3 or 4 degrees above normal, and the patients complained more or less of headache and general indisposition. In many cases the injections were practised in houses where, a few hours before, deaths had taken place from yellow fever, yet none of those inoculated died from the disease.

MADEIRA.—Medical men who may intend to recommend patients to visit Madeira for their health, or who may themselves have occasion to visit that island, will be glad to know that from and after July 1 a considerable reduction in the passenger fares from Southampton or Plymouth by the steamers of the Union Steam Ship Company has been made. The directors of that Company have decided to reduce the outward fares from 19 guineas 1st class, 13 guineas 2nd class, and 10 guineas 3rd class, to 15, 10, and 7 guineas respectively, the homeward fares remaining as at present—viz., 12, 8, and 6 guineas respectively. The passage money to and from Madeira includes railway fare between London and Southampton, or *vice versâ*.

ARSENICAL POISONING FROM CARPETS.—Among the numerous sources whence arsenical poisoning may be traced (vide *Medical Digest*, sect. 278 : 5 and 6), may now be reckoned carpets. A case recently occurred in New York (*Lancet*, June 1885, p. 1093) where a lady, who cut and sewed a new green carpet, suffered severely from all the symptoms of arsenical poisoning ; and, upon analysis, the carpet was found to be loaded with pigment of a most dangerous character. Among recent sources of arsenical poisoning may be reckoned fly-papers (*Lancet*, July 1884, p. 408), money counting (LONDON MEDICAL RECORD, 1883, p. 526).

THE FORMATION AND DISINTEGRATION OF FAT.—At the meeting of the Verein für Innere Medicin at Berlin on March 30 (*Deutsche Med. Wochensch.*, May 7) a paper was read by Dr. Kossel, on the formation and the disintegration of fat, chiefly with reference to the treatment of obesity. He enumerated some of the experiments which have been made by various writers with a view to proving how fat is formed in the body, and showed that it may be elaborated from the albumen taken into the body with the food. In the course of a very interesting discussion which followed, the treatment advised by Oertel, consisting in a diminution of the fluid taken, was gone into. It was maintained that fluids act in a manner favourable to the deposition of fat by distending the stomach mechanically, so that digestion cannot go on so quickly or so effectually, by diluting the gastric juices, and thereby interfering also with digestion, and by embarrassing the portal, and, consequently the systemic circulation. It was generally agreed that the unfavourable influence was exercised only by excessive quantities of fluid, and that *all* fluid should not be dispensed with.

PERSISTENCE OF VITALITY IN MICRO-ORGANISMS.—M. Duclaux states that, on examining the retorts used by M. Pasteur for his experiments in 1860, he found fifteen among the sixty-five certainly living microbes after twenty years had elapsed. All the living microbes were aerobic ; they absorb the slightest trace of oxygen left in confined air, and their germs live in an atmosphere deprived of oxygen. Those which have the most persistent vitality are the most active. There are six of these; the *Aspergillus niger* of M. Raulin, or *Sterigmatocystis nigra* (micrococcus)of M. van Tieghem (mucoraceæ), the *Urococcus virax*, the *Tyrothrix tenuis*, *Tyrothrix filiformis*, discovered by M. Duclaux in his study on milk; *Tyrothrix tenuior*, *Tyrothrix tenuissimus*, new species, which, like the two preceding species, are bacilli.

The Therapeutic Uses of Naphtha.—According to the researches of Professor Dobroslavine, of the Petersburg Medico-Chirurgical Academy, during cholera epidemics in Russia, the districts near naphtha springs were always exempt; also the factories where this substance is prepared. It is suggested that if naphtha were used for lighting streets and hospitals, cholera would be prevented. Professor Rossbach has used naphthalin with great success in obstinate intestinal catarrh. He gives progressive doses, beginning at 50 centigrammes, and reaching 5 grammes in twenty-four hours. In infantile diarrhœa he has administered 10 centigrammes every five hours, and obtained most satisfactory results; and also in typhoid, Professor Rossbach has observed tuberculous ulcerations of the intestines cured by administering doses of naphthalin varying from 50 centigrammes to 3 grammes.

The Spread of Cholera.—The report 'On the Course and effects of Cholera Morbus in Paris and the Rural Districts of the Seine during the Epidemic of 1832' ('Sur la Marche et les Effets du Choléra Morbus dans Paris et les Communes Rurales du Département de la Seine'), drawn up by a special commission, stated that the people who washed clothes furnished a greater cholera mortality than members of any other trade or calling; during the epidemic in Paris alone there were 165 deaths amongst men and women following this calling. M. Marey, in his recent work 'Les Eaux contaminées et le Choléra,' quotes this report, and affirms that Briquet's report of the epidemics prior to that of 1850, and Barth's of the years 1854 and 1855, and also original documents belonging to the Académie de Médecine, furnish the following information. 'The clothes of cholera patients—their soiled linen—sent to places at a great distance, have transmitted cholera to people in those localities. These articles have preserved during many weeks these dangerous properties. Food prepared in the house of a cholera patient and conveyed to another house, has communicated cholera to most of the people who partook of it.' According to the same source of information, the mortality from cholera is higher among washers of linen—men and women—than among members of any other calling. This fact is also among the few resulting from the Commission of 1832, which admitted that it could not arrive at any of the causes of the propagation of cholera.

The First Appendix to the 'Medical Digest.'—Considering that during the past four years much has been written on medical science, it has been suggested that it would be acceptable to many if the first appendix to the *Medical Digest* were to be issued at the end of 1885 instead of at the close of 1886, as originally proposed. Dr. Neale wishes upon this point to elicit the opinion of those interested in the subject. He therefore asks us to state, which we do with pleasure for so old and valued a contributor to these pages, that a postcard may be addressed to Messrs. Ledger, Smith, & Co., St. Mary Axe, E.C., expressive of such opinions, and noting at the same time any needed corrections in the edition of 1882.

There are already more than two thousand additions to the index, and it is believed that the body of the appendix will, at the end of 1885, contain nearly a fifth part as much matter, all of which is new, as the edition of 1882, which embodies the periodical medical literature of thirty-five years. This increase is due to the fact that, in the first place, more periodicals are included than formerly; and, secondly, that it has been endeavoured to make the work more truly a 'Digest,' and so to remove it further than ever from being mistaken for an 'index' only.

Injuries of the Heart in Birds.—In the *Lancet*, January 1885, p. 190, Mr. Owen writes that he has examined several partridges that had been shot, with a view of ascertaining the cause of their peculiar flight and death. In one case, a bird, after receiving a No. 6 shot, continued flying for about one hundred yards, then suddenly flew upwards to a considerable height, and fell like a stone to the ground. On examination, it was found that the pericardium was lacerated, and on the surface of the heart some portions of feather were seen entering its substance near the base. When the ventricle was opened, in addition to some feathers being seen, there was a No. 6 shot found on its inner surface. The case shows that in birds prolonged muscular exertion can take place, even after severe injuries to such an important organ as the heart.

Climate.—In the *Brit. Med. Jour.*, Jan. 1885, p. 151, a short account is given of the first Cantor Lecture, delivered by Dr. G. V. Poore. The lecturer commences with the chemical composition of air, and points out that, although its uniformity is not absolute, it is very nearly so. The variations in the amount of oxygen contained in the 'open air' of different localities is very trifling, when compared with the variations in the absolute quantities of oxygen taken into the lungs under different conditions of pressure and temperature. The causes of the varying amounts of moisture in the air were next dealt with, and the causes of its deposition in the form of dew, fog, and rain. The power of the human body to withstand the extremes of climatic temperature was shown to be almost unlimited. The only trouble due to excess of temperature was sunstroke and heat-apoplexy, and these were often as much due to errors of hygiene, dress, and diet as to heat. As for extremes of cold, ample food and clothing were all that was necessary to enable a healthy man to withstand them. The history of the *Eira* expedition to Franz-Josef Land afforded an ample proof that food and protection enabled twenty-five men to withstand considerable exposure to cold. The wise precautions of Mr. Leigh Smith and Dr. Wm. Neale enabled these men to pass through an arctic winter unscathed, though they were deprived of sun-light for four months, and lived together in a hut for ten months.

Ankylostomum Duodenale.—The connection between the presence in the intestines and other organs of particular entozoa and more or less grave forms of anæmia has long been recognised in Egypt and the tropics. But it was not until a few years ago that the ankylostomum duodenale was observed in Europe, first among the labourers employed in the St. Gothard Tunnel, and still more recently in the brickfields round Liège and Cologne. A case is now reported by Dr. G. Mayer in the person of a collier at Herford, in Westphalia, but who had within the previous year visited both the neighbourhood of Cologne and Serain, near Liège, working at each place in the brickfields. Like the ascaris lumbricoides, the ankylostomum does not reproduce itself in the human bowel, the severity of the symptoms and the intensity of the anæmia depending on the number of the larvæ present. Dr. O. Leichtenstern, of Cologne, who has had many opportunities of observing the effects of this accident among the brickmakers of his district, distinguishes the cases as acute or chronic; acute when a large number of the worms are taken in at one time, and chronic when they are fewer in all or enter the system at longer intervals. In the former case, the loss of blood may be alarming and even fatal; in the latter the symptoms are less marked, but the resulting anæmia may at length become serious. It is worth inquiry whether the disease is really unknown in this country, or whether some of the cases of undefined ill-health and anæmia returned as 'consumption' among miners and the like may not be after all unrecognised instances of ankylostomum.

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Progress of the Medical Sciences and o
Subjects relating to Public Health

EDITED BY ERNEST HART

FOR CONTENTS SEE PAGE XV

LONDON
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SHANKLIN, ISLE OF WIGHT:

A HEALTH RESORT

AND

WINTER RESIDENCE.

Shanklin is situate in a deep Bay on the South-east of the Isle of Wight, and is eminently suitable as a Health Resort for Invalids suffering from effects of hot climates, or from depression and loss of tone consequent on over-strain of mental or physical powers.

The Climate is mild, pure, and salubrious. Owing to the considerable elevation at which Shanklin stands above the sea-level (from 100 to 250 feet) the air is bracing, and there is not that humidity which is experienced in places further West.

The Scenery is beautiful. The Country, though hilly, is quite easy and practicable for walking exercise by invalids.

The Soil of the district is chiefly of the green sand formation; and, owing to its porosity and the undulated surface, the roads and walks are available for pedestrians soon after rain. Shanklin is under the supervision of a Local Board of Health, and is thoroughly sewered. It has a considerable natural fall towards the Sea, into which the Sewage is discharged beyond low-water mark at some distance from the Town. The Sewers are ventilated by the usual Street Ventilators and by Shafts.

The Water Supply is obtained from the neighbouring hills, which rise to a height of nearly 800 feet above sea-level. The Water has been analysed by the Sanitary Authority, and is pronounced to be of excellent quality.

On the East Cliff, the most exposed part of Shanklin, shrubs and plants of tender natures thrive luxuriantly, although left out in the open, and unprotected through the winter months: Myrtles, Fuchsias, Veronicas, Euonymas, Sweetbays, Laurestinas, Lemon Plants, Geraniums, and many others of delicate habit, flourish there and attain great size. This affords proof that the easterly winds are so tempered by their passage over the sea that they are deprived of their virulence. All through the winter months the gardens present abundant evidence of the mildness of the climate at Shanklin, and testify to its fitness as a place for the winter residence of persons of delicate health.

The Report of the Medical Officer of Health (Dr. G. H. R. Dabbs) for the year ending Dec. 31, 1884, states that the rate of mortality was only just over 10 per 1,000; and that there had been an entire absence of any contagious or infectious disease during that period.

Shanklin is well supplied with Hotels and Shops; also with Furnished Houses and Lodgings of good class, mostly detached, and with gardens. There are Six Churches and Chapels, a Literary Institute, and several large rooms available for public meetings and general purposes of recreation; also a Subscription Lawn Tennis and Cricket Club. The Shore is covered with beautiful Sand, and is very safe for open Sea Bathing and for Boating; there are Establishments for Hot and Cold Sea Water Baths, and a fine level Esplanade, which extends for nearly half a mile.

Any information required as to Hotels, Houses, or Apartments, may be obtained gratuitously upon application (inclosing stamped and directed envelope) addressed to

ARTHUR F. NEALL, House Agent,
SHANKLIN, I.W.

The London Medical Record.

ARTICLE 4529.

SALVIOLI ON HYDRÆMIA AND HYDRÆMIC ŒDEMA.[*]

PROFESSOR G. SALVIOLI has recently published in the *Archivio per le Scienze Mediche* an experimental study on 'Hydræmia and Hydræmic Anæmia.' The relation of œdema to diminished concentration of the blood is still debated by pathologists, the question especially turning on the localisation of the transudation and on the conditions occurring in the vessels. It was long ago attempted to determine these conditions experimentally, hydræmic plethora being caused in animals for the purpose of observing where the liquid injected was deposited. Majendie was among the first who described the dropsical swellings and cutaneous œdema in animals, thus giving experimental foundation to the theory that tenuity of the blood with increase of its mass explained the formation of hydræmic œdema. Cohnheim and Lichtheim rejected this theory. After causing extreme dilution of the blood, they never observed any œdematous infiltration of the subcutaneous cellular tissue nor effusions into the serous cavities; but, instead, increased urinary secretion, abundant elimination of water by the intestinal surface and glands, œdema of the stomach, intestine, ascites, and in rapidly fatal cases pulmonary œdema.

Professor Salvioli has also instituted experiments on animals, causing in them hydræmic plethora by injections of varying quantities of a seven per cent. saline solution. He found that, when the quantity injected was small, the resulting hydræmia was of short duration, and was promptly resolved by abundant elimination of urine. If more were infused, so as to increase three times or more the mass of the blood, the following series of phenomena occurred. During the experiment the animal (dog) passed great quantities of urine, much saliva flowed from the mouth; there were often vomiting and liquid diarrhœa, and lacrymation. After death, fluid was found in the peritoneal cavity, the stomach and intestines were full of fluid and their coats œdematous, the lymphatic glands, pancreas, liver, spleen, and kidneys œdematous. The pleura and pericardium were free; the lungs contained much or little; the bronchial mucous membrane and salivary glands were swollen; the brain was sometimes œdematous; the skin was generally without œdema except the lids, neck, and groins. These experiments showed that the saline injection was more or less rapidly eliminated, and that many organs assisted in this process in degrees varying with their function and anatomical character. If the liquid introduced were small, the kidneys alone were sufficient for its removal; a larger amount being injected, the glandular apparatus and gastro-enteric tube was infiltrated and eliminated it; and finally other viscera also became infiltrated and œdematous.

Dr. Salvioli next sought to determine the causes which permit the escape of the excess of liquid by certain portions of the circulatory system rather than by others. From experiments on dogs, he found that the processes of filtration differ in various parts; that is, the permeability of the vessel-walls varies in different organs, and is connected with the quality of the circulating fluid, the pressure, and the state of the membrane. Thus the fluid escaped more easily from the vessels of the intestine than from those of the limbs; the œdema increased with the increase of pressure and with the dilution of the blood, and was exaggerated when the vessel-walls were modified with irritants; the subcutaneous cellular tissue became œdematous only when the artificial circulation with hydræmic blood was of long duration or when the pressure was elevated, or if there were alterations in the vessels.

Having thus established that the skin in dogs is the section least permeable to the formation of œdema, Salvioli proposed to suppress the principal paths of elimination, to determine where the excessive water would be then deposited. He therefore tied in a dog the renal vessels and the superior and inferior mesenterics, and then injected the saline solutions. Towards the end of the experiment, the animal presented slight cutaneous œdema of the abdomen and eyelids. After death, he found intense œdema of the subcutaneous cellular tissue of the abdomen, thorax, and thighs; the intestines were pallid, non-œdematous; there was pulmonary and cerebral œdema. This result was always confirmed in analogous experiments, while it was not produced by simple ligature of the renal vessels, for then the transudation from the abdominal vessels became still more intense than in the preceding experiments. Therefore, with the suppression of the more permeable sections of vessels, the water introduced into the circulation was infiltrated into the tissues next permeable, including the skin. To explain the localisation of these effusions, besides the conditions above-mentioned, must be added the different elastic resistance of the vessels, and their situation; lying in tissues of different resistance, some are more easily distended than others, and hence more readily favour the formation of œdema.

He then goes on to examine the different morbid processes occasioning hydræmia, taking the renal as the most controverted. Passing in review the opinion of Bright, who attributed the œdema solely to the impoverishment of the blood in albumen; that of Bartels, who, considering albuminuria not sufficient to explain nephritic dropsy, attributed it to the retention of water in the circulation, that is, to the formation of hydræmic plethora; that of Cohnheim and Lichtheim, who referred the anasarca to an inflammatory state of the cutaneous vessels which rendered them more permeable, and who rejected the opinion of Bright as insufficient to explain many symptoms, and those of Bartels, since in their experiments on dogs, rabbits, sheep, horses, and goats, they observed always, on provoking hydræmic plethora, dropsical effusions with localisations very different from those observed in kidney cases, even when the quantity of saline solution infused in the veins was excessive, Salvioli comes to very different conclusions. He premises, first of all, that it is necessary to establish the anatomical and physiological differences presented by the various kinds of animals on which comparative observations are made; since on these differences depend the various forms which the morbid processes assume in different animals. For instance, while in man the skin assumes an important part in the elimination of water, in the dog it has no such value. Artificial and forced hydræmia cannot be really compared with the gradual hydræmia in man, which is always connected with visceral alterations, and in which the secretory functions of the different organs are nearly always diminished, while in the first the secretory functions are enormously increased. He draws from his experiments the conclusions that the various organs present physiologically different filtrations and a different permeability to water, and that the processes of filtration undergo modifications according to the liquid circulating, the blood-pressure and the state of the vessel-walls; and that the localisation of these processes can be changed by suppressing the vessels which most readily allow filtration. An increase hence in the mass of the blood from excess of water cannot remain in the circulatory system, but must escape, and does escape, either directly by the natural way, or by being deposited in some parts, not the same in different animals, which may be called 'hydræmic reservoirs;' and it is deposited in them because they possess more permeable vessels and more favourable anatomical conditions. Entering the field of human pathology, he remarks that clinical observation shows us that in grave hydræmia of various origins, but especially of nephritic, hydræmic transudations occur chiefly in the subcutaneous cellular tissue; and this localisation is independent of preceding alterations of the blood-vessels as supposed by Cohnheim, but connected with the function and structure of the human skin.

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[*] SALVIOLI, PROFESSOR C.—Hydræmia and Hydræmic Œdema. (*L'Archivio per le Scienze Mediche; La Salute*, Fasc. i., 1885.)

Recapitulating shortly the conclusions which Salvioli draws from his experiments on the relations of hydræmia to dropsy, one sees that it is connected with various conditions; firstly with the hypo-albuminotic state of the blood, conjoined with hydræmic plethora; then with the physiological or morbid constitution of the vessel-walls; lastly, with the degree of pressure and tension of the blood in the vessels. This last factor has great importance in the production of hydræmic œdema, and regulates its degree and disposition according as in simple plethora, or in hydræmic plethora, the energy of the cardiac contractions is augmented or enfeebled. Only in hydræmia consecutive to acute nephritis is observed constant elevation of the blood-pressure, which is maintained by the hypertrophy of the left ventricle. In this first stage œdema occurs, which may be called active, localised especially in the skin, that is in the point where in man exists the greatest permeability of the walls of the vessels. In the later stage, common so-called passive œdema occurs instead, which resembles in its disposition the œdema of heart-disease, and is dependent on altered nutrition of the myocardium, and consequent lowering of the arterial pressure and increased tension in the venous system.

G. D'Arcy Adams, M.D.

Article 4530.

GROCCO ON ELECTRIC CHOREA, OR DUBINI'S DISEASE.*

Electric chorea, or Dubini's disease, although described with much accuracy by many Italian authors, as Dubini, Frua, Morganti, Pignacca, Tommasi, Stefanini, Orsi, Cavagnis, &c., is either altogether ignored or very imperfectly described by foreign authors. From the examination of eleven cases which came under his observation, Grocco is led to make the following observations.

1. The three types of the disease described by Pignacca, the pure, the epileptic, and the cephalic or cerebral, very often do not occur as such in practice; the symptoms changing from day to day, so that a case to-day which might be described as pure, to-morrow may become epileptic or cerebral. This is important, as showing the identity of the morbid process in correspondence with various groups of symptoms.

2. Various disorders of motion occur in electric chorea, partial rhythmic shocks, violent partial or general convulsive attacks without loss of consciousness, epileptiform attacks, rigidity and muscular cramp, and atrophy of paralysed muscles. Besides these different lesions of motility, besides the tonic and clonic convulsive attacks, and early or late cramps, which are lasting and permanent, paroxysmal cramps occur with paroxysmal exacerbations, lasting minutes or hours, during which the patients suffer acute pain, and assume in the affected parts the most strange and abnormal attitudes. And, besides the more or less extensive rhythmical contractions and subsultus tendinum, there are tremors and movements recalling abortive forms of common chorea.

3. He combats the opinion of Clerici that the choreic attacks, rather than the rhythmic spasms, must be considered as pathognomonic of this disease. Differential diagnosis is only possible by considering all the symptoms, and not by attributing to any one an extraordinary value. To show how careful we must be in admitting in a given case the absence of rhythmical spasms, he gives the case of R. D., a girl aged 20, who, after several days of general malaise, was seized on April 27 with headache, fever, and, after some hours, general convulsions, without loss of consciousness, of few minutes' duration. The fever and headache continued with progressive prostration, and marked dulness of intellect; from time to time there occurred instantaneous muscular shocks of the limbs, chiefly of the arms. On May 2 she was admitted to the hospital; her expression was dull, and with difficulty only could she be made to answer questions. Her temperature was 38° C. (95° F.); she complained of headache; there were markedly painful points on the face, some hyperæsthesia of one half of the body; no signs of convulsive movements. Two days later, when she was first seen by Grocco, the temperature had risen much. The disease was first thought to be typhoid fever, but the history and irregular fever and form of stupor contradicted this supposition. While watching the patient, he noticed rhythmic shocks in groups of muscles in the thighs and arms, which could be distinguished from the more frequent subsultus tendinum; by exclusion only of other cerebral malady, he formed the diagnosis of electric chorea. The temperature continued to rise to 43°, and the stupor deepened into coma; abundant sudamina appeared; the urine was albuminous; and death occurred on May 7. The rhythmic movements were not seen by the physician in charge of the case, and might easily have escaped observation. The consistence of the brain was slightly increased; the heart was flaccid, containing black fluid blood; the spleen was tumid and soft; Peyer's patches were slightly swollen, nowhere ulcerated.

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* Grocco, P.—Studies and Observations on Electric Chorea, or Dubini's Disease. (*Annali Universali di Medicina*, Nov. 1884.)

4. Faradic excitability is not constantly defective in the paralysed muscles, so that the symptom has no absolute value in diagnosis. But if defective it is an important symptom, as throwing light on a group of symptoms which in other respects might point to a different cerebral disease, and because, if associated with greater galvanic excitability, it denotes a process of degeneration of the paralysed muscles.

5. Nothing has been written on the tendon-reflexes in electric chorea, and the author's observations are too few to justify a conclusion. In one patient the reflexes at last were deficient, but not absent. In another case, in which cerebral symptoms prevailed, the lower limb being paralysed and affected by rhythmic spasms, the patellar reflex was exaggerated. In a child in a late stage with muscular atrophy, the reflexes were much diminished.

6. Two cases are quoted in which there were bilateral rhythmical spasms, the spasms occurring on one or the other side, and even very partially on one side, or synchronously on both sides.

7. To the various disturbances of speech mentioned by authors, Grocco adds true dysphasia, the movements of the tongue, deglutition, and mastication, being unaffected.

8. The urine varies in specific gravity with the quantity passed; much pigmented when the temperature was high; in the active period it contained phosphates in excess; albumen was found in three cases, in one peptonuria.

In the second part of his work Grocco passes in review many cases in which rhythmic spasm or other symptoms simulating electric chorea occurred, the disease being something else. Among these he quotes a form of cortical Jacksonian epilepsy; a convulsive hemiplegia following childbed; rhythmic spasms in the muscles of the trunk and abdominal parietes, diaphragm, and upper extremities, in two children; lastly a case of cortical encephalitis, beginning in a subacute manner in a child aged 4, in whom the course of the illness alone could determine the diagnosis.

In the third part, he treats of the seat and nature of electric chorea, reviewing at length the opinions of a host of authors; he shows that these are far from agreeing as to the seat and nature of the disease.

His own opinion is that, as in true electric chorea cerebral symptoms are never absent, while spinal symptoms sometimes are, the chorea must be a cerebral disease or a cerebro-spinal disease. If many symptoms agree with the spinal seat of the lesion, such as the partial convulsions, the successive or concomitant paralyses, the muscular atrophy and the lessened or abolished electric excitability, the rise of temperature, the tendency of the urine to become alkaline, the eventual two-sidedness of the paralytic symptoms, &c., it must be remembered that with these symptoms there is a series, sometimes long, and sometimes even predominating, which cannot be attributed to lesion of the spine. When, for example, a patient is seized with stupor, headache, giddiness, delirium, with some general or partial epileptiform attack, there being no suffering in the spine, and electro-muscular reaction being intact where rhythmic spasm or paralysis occurs, these symptoms cannot be attributed to a myelitis solely, being clearly cerebral. Taking, then, in examination certain symptoms, and especially the rhythmic spasms from which electric chorea gains its name, he observes that, if these occur from perturbation of the grey substances of the cord, yet it is known that it is cerebral diseases chiefly, and specially those of the cortex, which can and do give rise to clonic and tonic spasms. The seat of the diseases is not, however, exclusively cerebral. The defective farado-muscular reaction, which with atrophy, and sometimes with degenerative reaction, is present even within some months of the commencement, the disease implies necessarily spinal or peripheral nerve-lesions. And, as the paralyses and muscular atrophy occur when the rhythmic spasms and partial epilepsies first appeared, and these are to be regarded as cerebral phenomena, it is to be supposed that other lesions lower down are not developed accidentally, but in relation with the cerebral lesions.

As to the nature of electric chorea, although he combats the opinion of those who look upon it as a rare form of malarial infection, and that of those who hold that it is typhoid with cerebral symptoms, yet he admits that there is an infective process. Its infective nature is supported by the following facts. *a.* It shows itself as an endemic disease. *b.* In certain cases, especially the most acute, there are prodromal symptoms. *c.* There may be fever, and fever without an anatomical basis, sometimes with the classical symptoms of an infective fever (exanthems, &c.). *d.* In the urine there is excess of urea, albuminuria, and possibly peptonuria. *e. Post mortem* examination never explains the clinical symptoms, while the blood may be fluid and black, the spleen tumid, the heart flaccid, and Peyer's patches swollen, &c. Electric chorea, as the appellation of this disease, is etymologically improper and scientifically wrong, and apt, as, indeed, has happened, to cause confusion; the author therefore suggests its abandonment, and the adoption of the name of Dubini's disease, which has already been given it by Behrend, 'Ueber Spasmus Dubini oder die sogenannte Chorea Electrica.' (*Jour. für Kinderkr.*, Band xx., 1854.) G. D'Arcy Adams, M.D.

Article 4531.

COMENGE AND PULIDO ON PROPHYLACTIC INOCULATIONS AGAINST CHOLERA.

Dr. Comenge, in the *Siglo Médico* for May 31, continues the account of his visit to Dr. Ferran, in Alcira (see London Medical Record for June). He speaks with great enthusiasm of Ferran's skill in manipulation, and of his exact attention to detail in the preparation of his cultivations. These he makes in gelatine on glass-plates or test-tubes, or in broth in small matrasses. When cultivated in gelatine on slides, the microbe produces characteristic colonies, having the appearance of roundish drops, transparent, depressed in the centre, with irregular borders; this appearance being due to the liquefaction of the gelatine by the microbe. The colonies increase in size and coalesce with neighbouring ones, so that the layer of gelatine comes to look 'like a transparent leaf bitten in all directions by bees.' A solution of bichloride of mercury prevents the formation of colonies. In tubes of gelatine the bacillus forms a funnel-shaped very transparent gimlet-hole.

In the stools of a child who died of the 'suspected disease,' Comenge found, among cocci and common bacteria, the comma-bacillus. Cultivations on slides and in tubes gave characteristic colonies, and in broth the different phases described by Ferran. The comma seems to be the only form to be found in the stools. Comenge made with Ferran many cultivations, and describes as the forms he saw. 1. The comma-bacillus, small bacteria endowed with movement, translucent, slightly curved, of the same thickness throughout their length. 2. Spirilla or delicate flexuous thalli, which, by the making up and separation of their undulations, form the commas. 3. Thalli or filaments, larger than the above, with greater undulations. In the course of these filaments are seen sections in which the curves are small and thick, and small transparent spheres of various size suspended from the thallus. These spherules, called oögonia, are sometimes met with at the extremity of a flexuous filament, sometimes at the confluence of two filaments, and occasionally two or more oögonia form a small rosary. 4. Larger spherules are also seen, which are enlarged oögonia. These spherules look like balls of glass, partly full of a less transparent protoplasm, and hence, as their envelope is diaphanous, it sometimes seems as if the sphere were irregular, and only formed by the part occupied by the protoplasm. Among these same spherules are seen some much larger, double or treble the size of a blood-corpuscle, with the protoplasm or visible contents thickened. This in others is divided into sections, tuberosities; they then are called oöspheres; their function is not yet known. All these forms require a slightly alkaline medium to develop. Although their evolution causes acidity in broth, it does not do so in gelatine. In the cultivation-fluids he was able to make out, as if embedded in the flexuous thallus, spores like transparent spherules, which, on the reabsorption of the cuticle of the filament, remain free, and increase in size; protoplasm appears, condenses, and takes the aspect of a mulberry-shaped body, and, on the conversion of this protoplasmic substance into spirillum, the spore is converted into an irregularly spherical body, either formed of laminæ or bristling with filaments which are the walls of the mulberry-shaped body. These forms are indifferent as to the reaction of the medium. That these forms are different phases of the evolution of the comma-bacillus, he thinks certain because, 1. they appear in pure cultivations of the comma-bacilli; 2. when spores, oögonia, or any other of the phases are placed in an appropriate soil they produce constantly, comma-bacilli, spirilla, &c.; 3. every one of these forms produces in gelatine the proper characteristics of Koch's bacillus; and 4. when commas, spirilla, or oögonia are sown with every technical care, and we invariably find the same phases of evolution differing from the primary one, there can be no rational doubt left, and still less when it is found that the pathological effects are identical. The bacillus or *peronospora* may then multiply by scissiparity and by spores, as happens with many microscopic vegetables.

Dr. Pulido, editor of the *Siglo Médico*, says in a leading article of that paper of June 7, that it can no longer be denied that an epidemic of Asiatic cholera is at present raging in the province of Valencia. Proceeding to discuss the question of the danger of Ferran's inoculations, he maintains that their innocence is clearly proved, both by the testimony of the Royal Academy of Barcelona and by the evidence of the numerous medical men who have not only been inoculated themselves, but whose experience already amounts to nearly 10,000 cases. The Royal Commission have examined over 900 people who have been inoculated, and in none of these had any dangerous effects been produced. Boils sometimes occur at the site of injection, but so they do after the injection of morphia or even pure water. Of the prophylactic powers of the inoculation, he says, proofs are beginning to accumulate, and Ferran himself is becoming more certain of its efficacy. In Alcira, from May 1 to 31, out of a population of 16,000, 8,794 were inoculated. Among the non-inoculated 118 cases occurred; of these 47 recovered, 56 died, and 15 remain. Of the inoculated, 14 were attacked; 10 of whom recovered, 3 died, and one remains ill. Of the re-inoculated 8 were attacked; 7 recovered, none died, 1 still ill. The three inoculated who died were attacked within five days of inoculation, so that probably they had already acquired the disease, which ran its usual course, uninfluenced by the inoculation. These facts speak strongly in favour of the prophylactic efficacy of inoculation, which, it must be remembered, after all, like vaccination for small-pox, can only aspire to reduce the malignity of the disease and to lessen the proportion of the attacked. Apart from these general statistics, certain facts occurred in Alcira which are most suggestive; these being that in some families, while the unprotected persons were attacked, the inoculated members escaped. In the town of Algemesi, out of a population of 7,856, 893 persons were inoculated. Of the non-inoculated, 263 were attacked; 136 recovered, 92 died, 35 remain ill. Of the inoculated, 8 were attacked; 7 recovered, and 1 died. Of the inoculated attacked, 6 were so within the first five days. The only death was that of a girl who died in the period of reaction, on the seventh day of the illness, who refused all nourishment.

These facts are not sufficient to form a conclusion, but certainly justify further inquiry.

In a paper read before the Royal Academy of Medicine of Madrid, Dr. Pulido* gives a short summary of Ferran's researches. Ferran recognises the comma-bacillus of Koch as the fundamental cholerigenic agent, and claims to have discovered that the comma is only one form of a complicated evolution, which the report of the Academy of Medicine of Barcelona thus sums up: spirillar filamentous thallus, apparition of spores in this; their escape and growth; increasing heterogeneity of their contents; conversion into mulberry-shaped body; issue of a stream of protoplasm; condensation of this and formation of a very fine spiral, which is the thallus of new vegetations. In certain phases of cultivation and in appropriate media, spherical bodies called oögonia and oöspheres appear, whose function and importance are yet to be determined. The cholerigenic action of the comma-bacillus is supported by the fact that it is always to be found in the dejections and intestines in cholera, and only in this disease. It is always to be distinguished from all other organisms of like or identical forms by various proceedings (growth in gelatine, inoculations, &c.). Inoculated in animals it alone produces, apart from all other influence, choleriform symptoms, which may even lead to the death of the animal. Inoculated in man, it causes similar symptoms, but of less intensity. These symptoms are, locally, a hot red swelling, appearing two or three hours after injection; general symptoms of reaction beginning in four hours, and varying from simple frequency of the pulse to high fever with pulse of 120 and temperature of 38° or 39° C., lassitude, rigors, loss of appetite, nausea, diarrhœa, cramps, insomnia on the first night. These symptoms disappear in twenty-four hours. Re-inoculations produce no general phenomena. The conclusions are these. 1. The comma-bacillus described by Koch is only one phase of a phytoparasite, now known as the peronospora Ferrani, which presents other distinct forms. 2. The inoculation of the bacillus may cause death with choleriform symptoms. 3. The cultivation of this microphyte in broth, under certain conditions, determines a series of attenuated virus, which, when inoculated in certain animals, are capable of producing general and local phenomena of variable intensity. Successive inoculations of gradually stronger virus, behave in a like manner to the successive inoculations of carbuncular bacteridia. Its inoculation in man determines at first in an illness lasting from twenty-four to forty-eight hours, of well determined evolution, which confers immunity from the effects of later inoculations with stronger virus.

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* Pulido.—Preventive Inoculation of Cholera. (*El Siglo Médico.*)

The members of the medical profession resident in Alcira have published (*El Siglo Médico*, May 31, 1885) a collective protest against the reports current as to the dangerous effects of Ferran's inoculation. They give the following statement showing the course of the disease from May 1 to May 26 with the results obtained. Population, 16,000; inoculated, 7,043; re-inoculated, 4,117:—

	Not Inoculated.	Inoculated.	Re-inoculated.
Attacked...........	95	12	6
Cured...............	37	9	5
Died...............	45	3	0
Remaining.........	13	0	1

All the inoculated attacked were so before the expiration of the five days from inoculation prescribed by Ferran as necessary for protection to be acquired. One of the fatal cases among the inoculated was already suffering from premonitory diarrhœa when inoculated.

G. D'ARCY ADAMS, M.D.

ARTICLE 4532.

ACCESSORY MAMMARY GLANDS AND NIPPLES.

AT a meeting of the Berliner Medizinische Gesellschaft in February, Dr. Cohn exhibited a patient who had recently suffered from inflammation of the left breast. In dressing the affected part, she accidentally observed that milk dribbled away from the left axilla. After careful examination, Dr. Cohn discovered the opening of a duct in the axilla; it was covered with skin, and milk flowed freely from it on pressure. There had been no abscess nor wound of a knife near the breast, such as might have suggested a milk-fistula. In Dr. Cohn's case there was no nipple. It appears to have been an instance of axillary mammary tumour, as described by Mr. A. H. E. Cameron in the *Journal of Anatomy and Physiology*, vol. xiii. Mr. Cameron's patient first observed a swelling under the left arm after over-exertion when pregnant, and there was reason to suppose that the capsule of the tumour ruptured on that occasion. There was a small orifice, 'but nothing like a nipple,' whence milk could be squeezed. Mr. Bickersteth informed him that he had seen two similar cases of nippleless glandular tumours bearing the characters of mammary glands; but in one instance the growth was not removed, and hence could not have been examined microscopically. Cameron suggests that, if morphological theories fail to explain the abnormality which he describes, we may accept Laycock's view that the mamma is simply an enlarged and highly developed sebaceous gland, and might make its appearance in any part of the body.

Klob's case of an accessory mamma growing on the left shoulder of a man, on the prominence of the deltoid (*Zeitschrift der k. k. Gesellsch. der Aerzte zu Wien*, 1858, No. 52, p. 815) is an extreme instance of this condition. It formed a true mammary gland, of the size of a walnut, and provided with a nipple about one quarter of an inch in length. Such a case could not be explained morphologically, since no animal has a nipple on the shoulder.

Before speaking of the possible morphological significance of some forms of supernumerary breasts bearing nipples, in women, it is advisable to consider briefly the characters of the mammary organs in the different orders of the mammalia, putting aside the highly specialised *Marsupialia* and the *Monotremata*, where, by the way, the gland possesses no nipple, a peculiarity of at least embryological interest in relation to Cohn's and Cameron's cases. At the outset, it must be observed that Professor Owen once found in a female orang-utan an accessory nipple on the left side, below the normal one and of smaller size.[*] In the *Simiadæ*, from the anthropoid apes to the marmozets or *Arctopithecini*, 'the teats are only two in number and they are pectoral.'[†] In the lower section of the *Primates*, the *Lemuridæ*, 'sometimes there are one or two pairs of teats on the abdomen, in addition to the ordinary pectoral pair.'[‡] In the very aberrant Aye-aye (*Cheiromys Madagascariensis*) 'there is but one pair of nipples, situated about one inch and a half in advance of the vulva, and one inch apart.'[§] The ventro-pectoral teats of the common carnivora and the large inguinal udder of the ruminants are familiar to all observers. Axillary teats exist in the *Pteropodidæ* (fruit bats or 'flying foxes') and in the flying 'lemur,' *Galeopithecus*. Hence, if the reversion theory can explain the significance of supernumerary breasts in women, there are plenty of places where the accessory nipples may grow; yet clinical experience proves that, as far as their site is concerned, these nipples deviate from all morphological laws. It may here be remarked that the pectoral position of the breast in our species is not, in itself, a proof of high type, since it is seen in the true bats, the dugong and manatee, the elephant, the sloth, and the ant-eater. Animals closely allied to those just named have inguinal or abdominal mammæ; hence the position of the glands can be of little importance; nor is the number of teats always in relation to the offspring, since in the rat twelve are found, whilst the still more prolific guinea-pig has but two; in the tenrec (*Centetes*), a hedgehog-like animal, twenty-two nipples exist; in the European hedgehog there are ten, ranging from the pectoral to the inguinal regions. The thin and flat mammary gland of this insectivorous animal seems, according to Owen, to form a continuous stratum.

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[*] *On the Anatomy of the Vertebrates*, vol iii., p. 780.

[†] Huxley's *Manual of the Anatomy of the Vertebrated Animals*

[‡] Huxley, *ib.*

[§] Owen, *loc. jam cit.*

A glance over the history of recorded cases of supernumerary breasts will show that their position hardly tallies with that of the normal breasts in the lower mammalia. Besides, too much has in one respect been said concerning the morphological significance of supernumerary mammæ, for the theory has been employed to prop up at least one error, the alleged occurrence of inguinal mammæ. Dr. Mitchell Bruce ('On Supernumerary Nipples and Mammæ,' *Journal of Anatomy and Physiology*, vol. xiii.) observed seventy-six cases of supernumerary nipples himself, but in none of this large series was the nipple found in the groin. Leichtenstern ('Ueber das Vorkommen und die Bedeutung (accessorischer) Brüste und Brustwarzen,' Virchow's *Archiv*, vol. lxxiii.) has pointed out how the fallacy had arisen through careless reference to Roberts' case (*see* Luschka, *Anatomie des Menschen*, Band i., Abtheil. 2) of a woman who had an accessory mamma on the outer aspect of the left thigh, four inches below the trochanter; it was accidentally discovered by the patient's child, who one day attempted to suck the nipple.

Leichtenstern seems to trust [*] the only two records of dorsal mammæ, which were both originally published in old works and in Latin, the first being vaguely described by Paulinus, and the second by Helbig, his authority being a Polish nobleman, 'vir fide dignus,' who saw the case in the Celebes. On such foundations lie an assertion that appears still to be a sacred tradition in text-books.

Again, unfortunately for morphological theories on the subject, abdominal nipples are almost unknown. Dr. Mitchell Bruce, however, describes two cases where one of a pair of nipples was distinctly below the lower border of the costal cartilages. This monograph, above quoted, was noticed in abstract in the LONDON MEDICAL RECORD, 1879. The subjects examined were out-patients attending at the Hospital for Consumption, Brompton, under Dr. Bruce's care, and 65 cases of supernumerary nipple were observed within a period of three years, and 11 more within a few months after the expiration of that period. Of 315 individuals taken indiscriminately and in succession, 7·619 per cent. presented supernumerary nipple. Of 207 men, 9·11 per cent. had supernumerary nipples, single or double; and of 104 women, 4·807 per cent. were similarly affected. The nipple was generally single, most frequent on the left side, and always on the front of the trunk, below and within the ordinary nipple. The nipple was generally small, and deficient in one or more of its elements. Inheritance could not be traced in any instance; but this is of little value, since the anomaly is often overlooked even by medical attendants; nor can any subject be very desirous of admitting its existence to relatives, who might betray the deformity to others, as in Dr. Lee's case. Whilst Dr. Bruce failed to find any case of axillary nipple, Leichtenstern (*loc. cit.*) gives a good drawing of one instance in his own experience, where pectoral accessory nipples also existed, both on the left side, and in a woman; the same observer quotes four other cases quite as authentic. Dr. Robert Lee [†] describes a case to which reference has just been made, where a multiparous woman had a pair of accessory mammæ near the anterior margin of the axilla, each somewhat *higher* than the normal gland, and about one-sixth of its size; they both yielded milk. Two other cases of this type are prescribed in Leichtenstern's monograph.

Comparing the above cases of supernumerary nipples or mammary glands with Dr. Cohn's and Cameron's cases, and considering them also in relation to the comparative anatomy of the normal gland, briefly recapitulated in this abstract, there appear to be strong grounds for believing that the anomaly is due to over-development of a sebaceous gland, and is not a reversion to a lower type in the animal kingdom. Dr. Robert Lee's case was probably a result of some irregularity in the development of the glandular elements intended to form a single and normal mamma; under the same class of abnormality may be included cases of double nipple on an otherwise normal breast.

ALBAN DORAN.

ARTICLE 4533.

SUTTON ON DISEASES OF THE REPRODUCTIVE ORGANS IN FROGS, BIRDS, AND MAMMALS.

MR. J. BLAND SUTTON has recently contributed to the *Journal of Anatomy and Physiology*, vol. xix., an important monograph on diseases of the generative organs in the lower animals. The same writer read a paper on that subject before the Pathological Society of London last autumn.

Flexions of the Uterus.—The author figures three cases, showing respectively anteflexion, retroflexion, and extreme flexion to the right, in the uteri of monkeys subject during life to an aggravated form of rickets. Acute anteflexion was seen once in the aberrant deer-like *Hyomoschus*, and once in *Cervus molluccensis.* The former had recently borne young. 'So far as can be ascertained, the animals were in no way inconvenienced by the abnormal condition of the parts.' [Owing to the great difference in the axis of the trunk and the form of the pelvis, there can be little clinical resemblance between flexions in animals and flexions in women. In the former, subjective symptoms are often impossible to discover, so that it is hard to say whether they are 'inconvenienced' by flexions.—*Rep.*]

Atrophy of the Uterus.—In the body of an adult well-nourished lioness, the uterus and its appendages were of smaller size than the corresponding parts in a cat.

Pyosalpinx.—Owing to the complicated form of the internal organs in the kangaroos, distension of the Fallopian tubes with secretion appears to be frequent in these animals. Escape of this secretion into the peritoneal cavity sometimes causes acute or chronic, general or local peritonitis. [This would be homologous, according to some gynæcologists, to the perimetritic adhesions observed in cases of pyosalpinx in woman, and to the cases of acute and fatal peritonitis following the rupture of a dilated suppurating tube.—*Rep.*]

Other Diseases of the Oviducts.—In male toads 'Bidder's organ' is found; it is a portion of the genital gland which retains the primitive or 'common' type, whilst the remainder becomes testicle.[*] When unusually developed, the rudimentary duct of Müller, homologous to the Fallopian tube, or oviduct, is also larger than usual and, under these circumstances, shows cystic dilatations. Disease of the oviduct (the left alone persists in adult birds) is frequent in hens. The duct may be too narrow to transmit the yolk, so that the fowl lays small eggs with a perfect shell containing albumen alone, whilst the peritoneal cavity fills with yolk. The undeveloped right oviduct may become cystic; and the cyst thus formed has been known to burst, causing fatal peritonitis. All these abnormalities may be associated with male or hermaphrodite peculiarities in plumage, combs, and spurs.

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[*] 'Ist doch kein genügender Grund vorhanden, die beiden folgenden Fälle anzuzweifeln.' Paulinus gives the precise (?) seat of the breast in his case as *e regione in tergo*!

[†] The history of a female who has four mammæ and nipples.—*Med.-Chir. Trans.*, vol. xxi., 1838.

[*] For information on the tendency of the testis in the Batrachia to retain, more or less, the primitive type, *see* 'Griesheim and Pflüger on

Parovarian Disease.—Mr. Sutton, in dissecting the appendages of fifty mares, found that in about two-thirds the ovaries appeared to be cystic. He believes that the cysts are really of parovarian origin. [They may possibly arise from the connective tissue between the folds of the broad ligament, independent of the parovarium. This is certainly sometimes the case in women.—*Rep.*] These cysts are most common in old mares, at a time when they cease to propagate. Mr. Sutton attributes this fact to passive local hyperæmia, common at that period of life. After parturition the parovarium is red and tumefied; in sheep it is always most plainly visible during pregnancy. [In ovarian disease in women it generally undergoes hypertrophy, and always becomes stretched.—*Rep.*]

Ovarian Cysts.—These were observed in a tiger, a cat, a tree-porcupine, and a sterile goat with imperfect development of the uterus.

[Before precise pathological observations can be made on the true nature of cysts found on the uterine appendages in animals, several other questions must be settled. (1.) What is the homology between the parenchyma of the ovary in woman and in animals (*see* 'Harz on the Histology of the Mammalian Ovary,' LONDON MEDICAL RECORD, March 1885, p. 87)? (2.) What is the homology of the tissue of the hilum of the ovary? This, in woman, contains no ovisacs, but numerous relics of the Wolffian tubes; in fact, the parovarian tubes run directly into it. In some animals this tissue apparently does not exist. Other questions are: (3) the precise relation of the cysts found in the broad ligament or meso-salpinx of animals to the parovarian tubes, whether, in fact, the former really arise, as a rule, from the latter; (4) the true termination of the duct of Gartner, once believed to be close to the meatus urinarius, but now held, by most anatomists, to be much higher up the genital canal (*see* 'Fischel on the Duct of Gartner,' LONDON MEDICAL RECORD, March 1885, p. 88).—*Rep.*]

ALBAN DORAN.

ARTICLE 4534.

CARNAZZI ON A CASE OF TUMOUR OF THE CORPORA QUADRIGEMINA.*

THE case recorded by Dr. Carnazzi is of especial interest, from the light it throws on the functions of the parts involved, and from the fact that the opinion formed during the patient's life as to the nature and seat of the tumour was confimed after death.

The patient, a man named Colombi, aged 31, had good health till the middle of last July. Then he began to suffer from short sharp attacks of frontal headache, at intervals of several days. The attacks gradually increased in frequency, in severity, and in duration. Then they were accompanied by giddiness and vomiting. The mental faculties, hitherto unaffected, were disturbed only during the attacks. Silly acts were performed, ideation and perception were clouded, and memory was weakened or suspended. In the intervals between the paroxysms, the patient appeared quite well in every way. This alternation continued for two months, when the patient was taken into hospital in the middle of September.

At this time he was slow in expressing himself, and he had a slightly stupid look, but there was no lack of harmony amongst the features. The senses, sight, hearing, smell, and taste, were normal. The right pupil was somewhat mydriatic; but both reacted to light. There was no facial spasm or paralysis, and the tongue was protruded without deviation. While the patient was in bed, there was no functional alteration either in the trunk or in the extremities. When he was made to get up and walk, his gait was staggering. In the upper limb there was not any disturbance of function. There were no anæsthetic or hyperæsthetic points. Excretions and secretions were normal. The pulse and respiration were normal, and there was no fever. The patient complained only of continuous weight in the head, and of headaches recurring every ten or twelve hours, followed by vomiting or attempts at vomiting. This was the condition of Colombi when he was received into hospital, two months after the first symptoms had shown themselves.

Some days after this he was seized with a slight convulsive attack, rolling over on the left axis of the body, and remaining unconscious for about ten minutes. When he came to, he was confused in mind. Vision was obscured on the right side; the right pupil was mydriatic, and the iris inert. The left eye remained normal. During the attack the radial pulse fell as low as forty-four beats a minute, and remained at this point for some hours. These attacks recurred at first at intervals of four or six days; then every twenty-four hours, and lasting two or three hours at a time. The pulse on these occasions fell to forty or forty-two beats; and the respirations became stertorous.

With the progress of the case other symptoms appeared. Strabismus occurred, at first during sleep, then in waking-hours; the right eye was turned upwards, the left downwards. The head and trunk were permanently drawn backwards to the right; and the lower limbs contracted. The sight of the right eye gradually diminished to absolute blindness, and the left eye followed the same course later on. In the last fifteen days of the patient's life rapidly advancing bed-sores and a sacral abscess showed themselves. On November 13 the patient died, greatly emaciated.

Professor Lussana, who saw the case, diagnosed a cystic tumour of the mesocephalon. The author, after repeated examinations, was able still further to localise the disease as a cystic tumour in the corpora quadrigemina, especially on the left side.

The *post mortem* examination revealed a tumour about the size of a hen's egg, situated upon the corpora quadrigemina, which it had rendered atrophic. Hardly a trace was left of the divisions between its parts. The tumour was in contact with and slightly buried in the anterior-superior border of the cere-

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the Proportion of the Sexes in *Rana fusca*,' LONDON MEDICAL RECORD, vol. xi., 1883, p. 78.

* *Rivista Veneta di Scienze Mediche*, April 1885.

bellum, where there was slight and superficial softening corresponding to the origin of the transverse and superior peduncles. The softening extended about a centimètre on the right side, and half a centimètre on the left. The thickened and compressed peduncles did not present any change in texture. The tumour was a round-celled sarcomatous cyst containing about forty grammes of a creamy whitish fluid, probably mucoid degeneration. In the lateral ventricles were found several small hydatid tumours attached to the choroid plexus; four in the right ventricle, three in the left.

The author, in commenting on the case, recalls those mentioned by Nothnagel. Nothnagel gives eight cases of tumours of the corpora quadrigemina—namely, his own in 1876, one by Duffin in 1876, one by Rosenthal in 1875, one by Seidel in 1861, one by Kohts in 1875, one by Henoch in 1864, one by Steffen in 1864, and one by Gowers in 1879. The first four of these were complete, and were free from complications; and the case now recorded by the author resembled them closely in all respects. The other four cases were incomplete or complicated, and are useful only as a check. Cases mentioned by other authors are so complicated as not to be available for comparison.

The symptoms may be divided into three classes; 1, those due to direct permanent pressure; 2, those due to irritation; 3, those due to recurrent endocranial pressure.

Amongst the essential symptoms due to permanent pressure, are the amaurosis and the paralysis of the iris, which commenced in the right eye and advanced steadily to the left. The pressure of the tumour was at first chiefly on the left side. Another group of essential symptoms, found also in the cases referred to by Nothnagel, includes the irregular locomotion and the contracture of the vertebral column. Cephalalgia is also an essential symptom. The strabismus is ascribed to irritation of the transverse peduncles of the cerebellum.

Amongst the less constant symptoms are vertigo, stupidity, loss of memory and of consciousness on the part of the cerebrum; vomiting, singultus, and stertorous breathing on the part of the medulla oblongata. The slowing of the pulse during attacks of increased endocranial pressure accord with the results obtained experimentally by Schiff, who found that sudden bruising of the optic lobes in the frog, which correspond to the corpora quadrigemina in mammals, causes a temporary cessation of the heart's beat.

Touching the diagnosis of amaurosis of cerebral or of cerebellar origin from that due to disease of the corpora quadrigemina, the author makes two or three observations. He thinks that in cerebral amaurosis the intelligence is more likely to be affected. In cerebellar amaurosis he believes the defect to be an ataxy of movements of the eye, rather than a loss of true visual power. It is well to remember also that, according to Dugès and Schiff, the anterior bodies preside over vision, the posterior over intra-ocular movements. The corpora quadrigemina do not by themselves seem to influence the movement of the eyeball; and this is not difficult to understand, as the nuclei of the motor nerves of ball are in the floor of the fourth ventricle.

The occurrence of irregular movements and contractions recalls the observation made fifty years ago by Serres, that the corpora quadrigemina excite the association of muscular movements. Rolando, too, observed alteration of muscular movements from lesion of these bodies. Renzi noticed muscular contractions and disturbed locomotion from the same cause. According to Professor Lussana, the question concerns rather the peduncular motor fibres that pierce the corpora quadrigemina. In the case at present recorded, however, the antero-superior portion of the cerebellum was slightly and superficially softened, and this circumstance may have had some share in producing the symptoms.

In reference to the headache it is interesting to know that, when the corpora quadrigemina are touched with a piece of wood, there is convulsive agitation with indications of acute pain (Cortese and Lussana).

[A microscopic examination of the surrounding nervousness is not given; and in the absence of it the actual amount of disorganisation cannot be known with certainty. In regard to Professor Schiff, it may be remarked that later experiments led him to regard the base of the posterior eminences as governing intra-ocular movements, the posterior eminences themselves being concerned in the rotatory movements of the eyeball.—*Rep.*]

William R. Huggard, M.D.

Article 4535.

CANTANI ON LIPOCARDIAC ASTHMA.*

Under the name of 'lipocardiac asthma,' Professor Cantani gives an account of the affection described by him since 1864 as 'fatty heart asthma.' The patient is perhaps quiet in bed or in an arm-chair, when suddenly, without any apparent reason, the rhythm of his respiratory movements is disturbed. Little by little, sometimes almost insensibly, his respirations become more frequent, shorter, and more profound, amounting at times to a laborious and even stertorous dyspnœa. Gradually the respirations become less frequent and profound, returning by degrees to the normal. Such attacks are usually short in duration; severe attacks last only a few minutes, and mild attacks only about two or three minutes. At first the outbreaks are unfrequent—about once a month, or three or four in the course of the year; and then they follow fatigue, muscular efforts, or emotional disturbance. As time wears on, the attacks begin to recur at short intervals and without apparent cause.

The origin of these symptoms, according to the author, lies not in mere fatty hypertrophy of the heart, but in fatty degeneration of the muscular tissue of the organ. The symptoms show themselves when the heart begins to be tired. With this muscle, however, fatigue means impossibility to continue its work with its usual power. It requires, therefore, a brief period of relative repose, of less energetic contraction. This, however, involves a less complete emptying of the ventricles. Now, during this period of relative repose, of fatigue of the heart, the quantity of blood driven into the lungs by the right ventricle and to the rest of the body from the left ventricle is, for the time, diminished. Not merely, therefore, is there less blood oxygenated in the lungs, but the blood that is oxygenated is distributed more slowly throughout the body. This insufficient supply of blood to the tissues provokes a nervous erythism, or general hyperæsthesia.

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* Cantani.—Lipocardiac Asthma. (*Il Morgagni*, Fasc. ii., 1885; *Riv. Clin. di Univ. di Napoli*, April 1885.)

The recognition of lipocardiac asthma is important, inasmuch as the prognosis is much more unfavourable than in any other kind of cardiac asthma. It must be distinguished from angina pectoris, with which it is apt to be confounded, and with which, in fact, it is rarely conjoined. Another disorder of respiration with which it might be confounded is Cheyne-Stokes' respiration. Cheyne-Stokes' respiration, however, is a symptom in various morbid states. It has a different pathogenesis and a different significance. In it there is apnœa; in lipocardiac asthma, on the contrary, there is only dyspnœa. Cheyne-Stokes' respiration occurs at brief intervals, and does not occur long before death. Lipocardiac asthma occurs at distant intervals, and may occur for many years before death.

The treatment of lipocardiac asthma consists in improving the general health of the patient. Against the symptoms, digitalis, convallaria, valerianate of quinine, caffein, cognac, red wine boiled with cannella, &c., may be useful. In fatty persons who are not too old, ferruginous preparations may be tried. WILLIAM R. HUGGARD, M.D.

ARTICLE 4536.

ETERNOD ON REGENERATION OF THE SPLEEN.[*]

M. ETERNOD, Professor of Normal Histology at Geneva, makes an interesting contribution to this subject. Following up the researches initiated by Tizzoni, and carried on by various other Italian observers, Professor Eternod removed the spleen entirely in a young fox about four months old; assuring himself at the same time that there were no supernumerary or accessory spleens. Two other young animals of the same litter were kept without operation for comparison. They died, however, of well-marked rachitic lesions before the fox that was operated upon. This result is ascribed to the confined life of the cage. The fox operated upon lived for 161 days after the operation. The most remarkable points exhibited by *post mortem* examination and by the microscope were: (1) the presence of a nodule, consisting of newly formed splenic substance; and (2) the assimilation in structure of many of the lymphatic ganglia to the spleen. The splenic nodule was 13 millimètres long and 8 broad. It was surrounded by the gastro-renal ligament, and was situated near the great curvature of the stomach. In shape it was rounded oval, slightly bilobed. Its principal vessels came from the inferior coronary artery of the stomach; a few others were supplied from the adjacent adipose tissue. There was no hilum, and the vessels entered at different places. The microscopic characters were in most respects identical with those of the normal spleen. The capsule, which on one side was wanting, sent in trabeculæ. The Malpighian corpuscles were seen in an embryonic stage, as well as in a mature condition. The splenic pulp presented very much its usual appearance. The most remarkable things found, however, were certain foreign bodies imbedded deeply in most of the sections. Some hairs of wool coloured blue, some minute portions of the animal's own hair, and a scrap of ligature-silk, were found. The new tissue had formed around these bodies, and between the strands of the ligature-silk. The presence of these foreign bodies is accounted for easily enough. The blue wool came from the operator's coat; and the hairs were the sections made by shaving a part a second time. The silk was, no doubt, a piece that had been detached from the ligature in cutting it. The ligature itself was found on the splenic artery, surrounded by small embryonic connective-tissue cells, and some large cells with several nuclei. The condition of the lymphatic ganglia was also noteworthy, showing various degrees of assimilation to splenic structure; and it tends to support the view the author has long held, that the spleen is simply a vast improved lymphatic ganglion.

Professor Eternod draws the following conclusions. 1. There was a new formation, evidenced by a splenic nodule having anatomical connections quite unlike ordinary supernumerary spleens. 2. There was new formation of adénoid tissue (*a*) in the lymphatic ganglia and Peyer's patches; (*b*) in the adipose tissue especially of the mesentery; (*c*) and to a certain point in the hepatic lobules. 3. There was transformation of the parenchyma of the lymphatic ganglia into splenic parenchyma. 4. There was diminution (and probably alteration) of the blood-mass. 5. There was increase of the adipose tissue in general, especially in the mesentery. 6. All these facts agree generally with those found by other authors, especially in the dog. 7. The study of the alterations of the marrow of the bones is still to be made, and is reserved for the future.

The paper is illustrated by well-finished lithographs, executed by the author himself.

WILLIAM R. HUGGARD, M.D.

ARTICLE 4537.

BANG ON TUBERCULOSIS OF THE COW'S UDDER, AND ON TUBERCULOUS MILK.

DR. B. BANG has published in the *Nordisk. Medicin. Arkiv*, Band xvi., Häft 4, a paper on this subject, which he read at the last International Medical Congress. In the course of seven months, Dr. Bang, who is professor at the Veterinary School of Copenhagen, met with seven cases of tubercle of the udder in cows; and he also received a number of specimens from veterinary surgeons in Denmark, so that he has been able to examine in all twenty-seven cases.

The diagnosis of the disease is generally not difficult. Without any apparent change in the general health of the animal, a swelling of one quarter of the udder sets in. It very soon becomes diffuse; its consistence is firm, and it increases in hardness. At the commencement of the disease, apparently healthy milk is secreted from the affected part. When the disease has lasted about a month, the milk assumes more and more the aspect of a yellowish serum, containing small fibrinous flocculi; it never becomes purulent. If, as most commonly occurs, one of the posterior quarters be affected, there is always swelling, often very considerable, of the corresponding supramammary lymphatic gland.

Tuberculous mastitis may be associated with already existing phthisis; but the author frequently observed its development in apparently healthy, even fat, animals; so that tuberculosis of the udder may at least appear to be a primary affection. In such cases, calcareous deposits are generally found in the bronchial glands.

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[*] ETERNOD.—A Case of Regeneration of the Spleen in the Fox after Total Extirpation. (*Revue Méd. de la Suisse Romande*, Jan. 15, 1885.)

Whatever may be the state of the cow's health at the commencement of the disease, the tuberculosis rapidly becomes general, and the animal usually dies, or is killed, in a state of emaciation in the course of from two to four months.

In the first stage of the disease, when the milk secreted from the swollen udder presents a perfectly or almost perfectly healthy appearance, it is nearly always used for domestic purposes. But this milk contains a number, sometimes very large, of tubercle-bacilli. Even in a more advanced stage, the apparently healthy milk secreted from the unswollen quarters of the udder is used; this also always contains the tuberculous poison, as Dr. Bang has proved by inoculations on rabbits.

Dr. Bang has made experiments in order to ascertain whether tuberculosis is transmitted by feeding with raw tuberculous milk. In one series, he fed for some weeks two sucking-pigs (five weeks old) and a rabbit, with the apparently healthy milk from the unswollen quarters of a tuberculous udder; in another, he fed three pigs and one rabbit with the milk from both the swollen and the unswollen quarters. After death, he found in all the animals tuberculosis of the submaxillary and mesenteric glands, generally also tuberculous ulcers in the intestine, and sometimes granules in the liver, spleen, and lungs. These lesions were most intense in the second series, especially in the rabbits. These animals had been fed with the milk from May 8 to June 11, and were killed on August 8. The rabbits were slightly emaciated, and presented a large number of tuberculous ulcerations along the whole length of the intestine, tuberculous disease of almost all the mesenteric glands, and some tubercles in the liver; while the lungs, kidneys, and spleen remained healthy.

Dr. Bang mentions a case in which a veterinary surgeon traced the evolution of tuberculosis in a calf which had been fed with milk from a cow having a tuberculous udder. At the same farm, a pregnant woman was attacked with tubercular phthisis; her child was fed during the first three months with milk from a cow which soon began to show symptoms of tuberculosis, and it died tuberculous at the age of six months.

Many modern authors hold that the milk of a tuberculous cow contains the virus only when the udder is affected, and have attempted to explain on this ground the contradictory results of experiments on the transmission of the disease by milk. The author, however, concludes from experiments (inoculation of rabbits) that sometimes, but not always, milk may contain tubercle, even when the udder presents no sign of disease.

Agitation of milk by a centrifugal apparatus causes the deposit of a sediment containing a large number of bacteria of various kinds. When the milk contains tubercle-bacilli, it may in this way be freed from them to a great extent, but not entirely. Inoculations with the sediment have produced tuberculosis, but with a rapidity and intensity varying according to the number of bacilli.

In order to ascertain the degree of heat necessary for the destruction of the tubercle-bacilli, Dr. Bang subjected raw milk, very rich in these organisms, to a temperature of 161° Fahr., and injected a cubic centimètre into the subcutaneous tissue of two rabbits, without producing any symptoms of tuberculosis.

The milk of a cow having a tuberculous udder has been analysed by M. Storch. He found that the milk had an alkaline reaction, and that the amount of fat, sugar, phosphoric acid, lime, and potash was diminished in the milk obtained from the affected portion of the udder. These changes were observed at the commencement of the disease, but were much more marked in a more advanced stage, while the milk continued to be rich in albuminates and in soda.

A. Henry, M.D.

Article 4538.

LUCAS AND CONNOR ON CEPHALHYDROCELE.*

Mr. Clement Lucas has suggested that the escape of cerebro-spinal fluid after fracture or trephining of the vault arose, not from the subarachnoid space, but from the lateral ventricle, which had been torn open by the original injury, and he supported his opinion by the account of a case in which this was shown to exist. In the last number of the *Guy's Hospital Reports* (vol. xlii.), he narrates another interesting case in which opportunity was given by *post mortem* examination to test the accuracy of his opinion. The two conclusions arrived at from a study of his earlier cases and of others were—1. that cases of simple fracture of the skull followed by collections of cerebro-spinal fluid beneath the scalp are peculiar to children; and 2, that, when cerebro-spinal fluid escapes through the vault, the injury has extended to the ventricular cavity. The case now reported supports the second of these conclusions.

A child, one year old, fell from a landing about twelve feet on to its head; it was not unconscious, but vomited. Before admission to the hospital, it had a clonic convulsion of the right side lasting half an hour, and another about an hour later, and then became paralysed on the right side. There was evident fracture with depression in the parietal region, for which Mr. Lucas trephined, and exposed a torn dura mater and thin blood-clot. The effect of the operation was to give relief at once to the symptoms of paralysis, and the dressing was thoroughly antiseptic. In fourteen days, there was cerebro-spinal serum oozing from a sinus on the vertex, and on this day the antiseptic dressing was left off and dry lint applied. On the twenty-first day the child was considered well enough to leave next day, but 'erysipelas' appeared, and the child died in two days with symptoms of pressure on the brain.

From a careful dissection of the brain and skull, it was seen that the brain had been damaged as far as the lateral ventricle, and there existed a track along which cerebro-spinal fluid had passed from the ventricle to the surface of the scalp. This fact is well shown in a drawing accompanying the paper.

This makes the second case in which Mr. Lucas has been able to show by *post mortem* examination what he argues as probably occurring in all injuries of the vault, accompanied by loss of cerebro-spinal fluid in any quantity. It is certainly astonishing to witness to what an extent the hemispheres may be lacerated, especially in children, without occasioning death or even urgent symptoms. His first case, though subjected to gross neglect, lived a year and nine months, and then died of acute meningitis. His second is still alive, five and a half years after the injury, but has a swelling on the forehead, which varies at different times, enlarging after a fit of crying. His third case is the one which forms the subject of this paper in the *Reports.*

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* R. Clement Lucas (*Guy's Hospital Reports*, 1876, 1878, 1881, and 1884). F. Connor (*Transactions of the American Surgical Association*, vol. ii.).

Dr. Connor, in the *Transactions of the American Surgical Association,* gives two cases which, he maintains, were of this nature. The first patient was aged 12, and after being run over had, besides other injuries, a simple depressed fracture of the occipital bone, over which was a fluid swelling which was aspirated after a week, as it did not go down, and four ounces of clear straw-coloured fluid removed. The sac rapidly refilled, and after four weeks was tapped again. Subsequently the operation was repeated four times, at intervals of about three weeks. Each time the fluid drawn off was of the same character; its specific gravity was 1007; it contained no albumen, no sugar; and the sodium chloride was about six parts per thousand. Six months after the receipt of the injury, the boy's only peculiarity was peevishness.

The second case was that of a child, only a little over 2 years, 'hydrocephalic and rachitic,' in whom a simple fracture in the parietal region was quickly followed by a swelling 4½ by 3½ inches, fluctuating and pulsating. This was not interfered with; and nine months after the injury the fontanelles had closed. There was now no subaponeurotic sac containing fluid, though pulsation could be distinctly felt through a membranous space of irregular shape along the course of the coronal suture. 'A broad, much elevated, bony ridge surrounds the original fracture area, and clearly indicates the position and size of the subaponeurotic tumour.' Beyond temporary unconsciousness, there are no bad symptoms recorded.

The first of these two cases is a valuable addition to the literature of the subject. The second is not of more than possible value, for there appears no evidence that the collection of fluid was not simple extravasation of blood, allowing that there was fracture as diagnosed. Dr. Connor tabulates twenty other cases in all, that have been recorded of subfascial accumulation of cerebro-spinal fluid after simple fracture of the vault. He draws a variety of conclusions, of which the most important is that operative interference should be restricted to the removal by aspiration of a limited amount of fluid, and such aspiration should be made only when severe pressure-symptoms have manifested themselves.

It appears by the table given that, besides the two cases reported by Mr. Lucas, two others by Billroth and Weinlechner showed by *post mortem* examination that communication existed between the lateral ventricles and the collection of fluid.

W. W. Wagstaffe.

M. Lucas-Championnière has modified his antiseptic method of dressing in consequence of the bad quality of the antiseptic gauze. He powders the wound with a mixture of cinchona, benzoin, eucalyptus, and carbonate of magnesia; then covers it with lint or cotton-wool, made from wood. This dressing need not be changed for eight days, and is very inexpensive.

Article 4539.

VOLKMANN ON THE SURGICAL ASPECTS OF TUBERCULOSIS.

Dr. Volkmann, of Halle, in a series of theses read before the Congress of German Surgeons at Berlin last April, and reproduced in the *Wiener Medizin. Blätter*, No. 15, 1885, after stating that the presence of the tubercle-bacillus had led to the recognition as local forms of tuberculosis of a number of abscesses, ulcers, &c., formerly described as scrofulous, strumous, and so on, observed that these surgical tuberculoses were far more amenable to treatment than those which came under the cognisance of the physician. He divided them into tuberculoses of the skin and subcutaneous connective tissues, of the oral, nasal, and anal mucous membranes, of the uro-genital apparatus, of the bones and articular structures, and of the lymphatic glands.

Lupus he held to be a peculiar cutaneous tuberculosis, showing little tendency to heredity, but much to local recurrence, and occasionally passing into the other forms.

Cutaneous tuberculoses, the scrofulous ulcers of former writers, though frequent in childhood and youth, are, he maintained, almost invariably secondary to some tubercular affection of the lymphatic or osseous structures, though the primary lesion may escape observation, on account of its small size or its having already been absorbed and healed. This is especially the case with abscesses consequent on tubercular spondylitis (caries of the vertebræ), which may frequently be speedily and permanently cured by free evacuation and antiseptic treatment. In 23 out of 57 cases accompanied by angular curvature, Dr. Volkmann obtained healing by a sort of first intention.

Primary tuberculoses of the subcutaneous connective tissue are not unusual in very young children in the form of boils on the buttocks, legs, &c., and are best treated by early incision and evacuation of the slough and cheesy contents. But occasionally the skin remains intact, and the process extends downwards, forming deep cellular abscesses unconnected with any diseased gland or bone.

Tubercular abscesses are after a time invariably enclosed in an opaque membrane of a violet or yellow-grey colour, thickly studded on its inner side, which is comparatively non-vascular, with miliary tubercles, the surrounding tissues being, beyond a slight degree of induration, entirely unaffected. This limiting membrane or sac is always present in, and absolutely diagnostic of, tubercular abscesses; and when, in clearing out an abscess containing cheesy matters, one finds diffused caseation in the adjacent muscle substance, the hardened tissues offering considerable resistance to the sharp spoon, we have to do with a syphilitic, not a tubercular, abscess; in fact, a softened gumma. The subject of non-tubercular chronic and so-called cold abscesses, such as occur during and after infectious diseases, demands further investigation.

Tuberculoses of the tongue appear either as ulcers, torpid or fungous, or as nodules, which gradually soften. Solitary fungous tubercular ulcers are easily mistaken for carcinoma, and Volkmann on two occasions discovered his error only after having extirpated the affected part. They also simulate syphilitic gummata. If left to run their course, they exhibit the characteristic structure and mode of rupture of tubercular abscesses. Such patients frequently become later the subjects of pulmonary tuberculosis; but early extirpation, even in persons with an hereditary taint, has often been followed by a complete cure.

Tubercular ulcers of the gums and throat, lenticular and confluent, may easily be taken for congenital syphilis; but with a strong light the miliary granules may generally be seen in the intervening spaces. They are most frequent about the age of puberty. Cicatrisation of the pharynx and gums, occlusion of the posterior nares, &c., more often follow these than those of syphilitic origin. They are more amenable to vigorous surgical treatment than are tuberculoses of the larynx, which are usually complicated with pulmonary tuberculosis; but even in these laryngeal cases, if primary, permanent recovery has followed the use of caustics, the cautery, and spoon, in Dr. Volkmann's hands. There is also a tubercular ozæna clearly distinguishable from the far more frequent so-called scrofulous rhinitis, a catarrhal affection, and tubercular disease of the nasal bones. He had twice met with tuberculosis of the lips, not lupus; in one of these cases the disease, from long-continued irritation by caustics, had acquired the appearance of cancer. Both were cured by excision, and in the latter case a plastic operation was performed.

Many fistulæ ani, the co-existence of which with pulmonary disease has been remarked by surgeons, are of tubercular origin. They demand energetic treatment by incision, evacuation, scraping, and antiseptic tampons, of which those charged with iodoform are the best; or, in obstinate cases, the actual cautery.

Analogous to these are certain rare cases of tubercular perityphlitis with abscesses, fistulæ, &c.

Tuberculosis of the testicle occurs mostly in early or middle manhood, more rarely in old age, when it must be distinguished from a simple purulent orchitis to which old men are subject. One testicle is often affected for a long time, even many years, before the other; in such cases its early removal is indicated; but when the disease has involved the two testicles, spermatic cords, and bladder, operative interference becomes impossible. Tuberculoses of the bladder and kidneys are known by the presence of bacilli in the urine. The value of nephrectomy in such cases is doubtful.

Tuberculoses of the uterus and vagina belong to the gynæcologist, and those of the mamma are extremely rare; but chronic non-tubercular indurative mastitis leads to enlargement of the axillary glands which may become tubercular, the breast itself remaining free. In primary mammary tuberculosis, amputation should be performed.

Tuberculosis of the bones and articular structures, all or almost all the so-called scrofulous and strumous affections of these tissues, caries, spina ventosa, white swellings, and fungous inflammations are, in fact, tubercular. The remaining cases of suppurative lesions of the bones and joints rarely present much difficulty in diagnosis; they are the various forms of osteo-myelitis, syphilitic and rheumatic affections, and septic infection. Some of the so-called metastatic inflammations of the joints occurring during or after exanthematous diseases are of septic or pyæmic nature, but others are undoubtedly tubercular.

Tubercular inflammation of the joints may originate either in the bones or in the synovial sacs. The former is considerably the more frequent form in children. It is occasionally, though rarely, diffused throughout the spongy tissue, but far more often is confined to the epiphyses, where the tubercles rarely exceed two or three in number, or a pea in size; and thus the affection remains one of the bones rather than of the joints, until by their softening and suppuration the contained bacilli are set free within the articulations or in the surrounding connective tissue.

Tubercular infiltration of the spongy portion of the bones of children leads to necrosis, with the formation of a characteristic cheesy or mortar-like sequestrum, which, as a rule, serves to limit the tubercular process, though in some cases secondary infiltrations may follow.

The primarily synovial form is more usually met with in adults and aged persons, involving single joints, especially the knee. The synovial membrane is pervaded by miliary tubercles, which may be accompanied by much vascularity and granulation, or may not. In the latter, the so-called cold abscess, common in old persons, the prognosis is very unfavourable. Occasionally we meet with large tubercles attaining the size of an almond, or a pigeon's egg, the rest of the synovial membrane often remaining unaffected. In such cases, extirpation of the nodule and drainage of the joint may effect a cure. Tuberculosis of the joints, whether primarily osseous, or synovial, may be unattended by suppuration (caries sicca), or by an excessive secretion of fluid (hydrops tuberculosis).

It is an important question how far synovitis, primarily non-tubercular, may subsequently take on the tuberculous character. At present it has been proved only in the case of the so-called 'rice-grains,' chronic dropsy, fibrinous synovitis, and a few others.

As to the treatment of tuberculosis of joints, Dr. Volkmann has had no success worth naming with injections of iodine, carbolic acid, corrosive sublimate, arsenic, &c., into the parenchymatous tissue; nor, except in the case of hydrops articuli, with puncture by a large trocar and washing out of the cavity of the joint. On the contrary, he prefers (1) incision, double whenever practicable, and drainage, with or without scooping out by a sharp spoon; (2) total extirpation of the capsule of the joint through a wide incision, as if for resection, leaving the bony epiphyses and articular cartilages; (3) complete or partial resection with removal of the capsule of the joint, leaving only such portions of the bone and cartilage as are perfectly sound. In all cases, the retention of any unhealthy structure is to be deprecated.

Tuberculoses of the bones without implication of the joints are represented especially by—1. spina ventosa, or flask-shaped expansion of the phalanges, mostly of the fingers and toes, sometimes of the metacarpal and metatarsal, and more rarely still of the ulna and radius, or even of the tibia and femur, occurring in infancy, and usually undergoing spontaneous cure without suppuration, or even permanent deformity; 2. suppurative disease and necrosis of the bones of the orbit, chiefly in children; 3. 'cold' abscesses of the cranial bones with necrosis in adults; 4. the ordinary form of spondylitis (Pott's curvature); though, from the early destruction of one or more vertebræ, and the consequences of the disease, this form would more properly be placed among tuberculoses of the joints. Tuberculosis almost never invades the shaft of the long bones in adults, and chronic ostitis and periostitis of the diaphyses are more often due to other causes, as syphilis and infective osteomyelitis.

Even the largest tubercular abscesses of bones and joints may be opened and evacuated without danger, provided every antiseptic precaution be taken; and the earlier the operation is performed the better. Wounds after operations on the joints and bones are very apt to exhibit renewed tuberculisation before the completion of the healing process. This tendency is to be vigorously combated by scraping out cavities and by the actual cautery; but, above all, by free incisions, and by stuffing the cavity, previously well washed out, with antiseptic tampons, of which iodoform and corrosive sublimate wools are the best. This procedure may have to be repeated six or eight times in a few weeks, as fast as fresh foci appear; but even then some caution must be observed in not pushing it too far, for while it precludes the possibility of healing by first intention, the extension and origination of tuberculous foci tend after each operation to become more circumscribed.

The occasional appearance of acute miliary tuberculosis (mostly basilar meningeal), after operation on the bones and joints, would seem to indicate the entrance of the virus into the circulation through the severed blood-vessels.

The occasional spontaneous healing, especially in children, of the typical forms of what the older surgeons called white swellings, Pott's curvature, spina ventosa, &c., but which are now known to be tuberculoses, even after the development of life-long deformities or cicatrices, holds out the greater encouragement to operation, with a hope of effecting an early and permanent cure.

The treatment of tuberculoses of the ligamentous structures is the same as that of those of the joints.

In the course of each and all of the tuberculoses above mentioned, the neighbouring lymphatic glands are liable to become infected. All those conditions, formerly described as scrofulous inflammations or caseous degenerations, are genuine tuberculoses. But the tendency of the glands in different regions to become involved, and their susceptibility to tubercular degeneration, varies greatly. Those of the neck are by far most frequently affected, next those of the elbow and axilla, and still less often those of the groin and popliteal space. It is quite exceptional, even in the severest tuberculoses of the bones and joints of the foot, to find the inguinal glands infected.

Tuberculosis of the lymphatic glands is mostly secondary to primary conditions which, though themselves not tubercular, act as exciting causes; such are cutaneous eruptions, blennorrhœa, and chronic catarrh. Besides, in a peculiar constitutional disposition (scrofulosis), and in cases of hereditary tendency, the glands are apt to undergo a simple hyperplastic irritative inflammation, often accompanied by catarrhal affections of the mucous and other tracts, and followed by permanent enlargement, softening, and caseation. In such cases they are generally found to contain true miliary tubercles and tubercle-bacilli. How far such caseation may occur without tuberculisation, is not proven. Excavation of all such glands by the sharp spoon or extirpation is imperative; for if the capsule, or even enlarged but as yet not softened neighbouring glands, be allowed to remain, a recurrence of the disease is inevitable.

Whether arsenic used internally is of any avail in tuberculous (scrofulous) glands, as it is in cutaneous affections, must be ascertained by further observation.

General Considerations.—The tuberculous character of any lesion cannot be doubted if inoculation give positive results, if the bacillus be discovered, or if the anatomical changes in the structures already described be found. All three kinds of evidence have been obtained for every one of the diseases above mentioned.

Extension of the tubercular process is effected by *a*, growth of the original focus; *b*, entrance of the bacilli into the lymphatic vessels. Though this occurs in almost every case, it by no means necessarily leads to the generalisation of the disease; for the lymphatic glands not only arrest the carriers of infection, but often manifestly destroy them. Even when the glands themselves are deeply infected, the virus may be arrested by others higher up. This function of the glands in limiting infectious processes has not hitherto been sufficiently realised. Generalisation occurs only when the last gland intervening between the affected part and the circulation, or the thoracic duct, is involved. *c*. Entrance of the bacilli into an adjacent serous sac may also take place, whether by extension of the original focus or by irruption of pus into the sac. The danger depends on the size and relations of the sac, its lymphatic connections, and the presence or absence of a granulation-layer which may act as a barrier to further progress. *d*. There may be a similar entrance of the bacilli, or of broken-down matters containing them, into mucous canals and cavities, where the virus either stagnates, or in the course of a long passage outwards infects the mucous membrane with miliary eruption. The most important of these is the system of air-passages in the lung itself; but the larynx may be infected in like manner, and the intestinal canal by the sputa swallowed. *e*. Entrance of the bacilli from the original focus into the blood-vessels or into lymphatics leading directly into the veins, or the formation of tubercular foci in the walls of the veins themselves, may set up acute general miliary tuberculosis.

We thus see that tuberculoses of the bones, joints, cellular tissues, skin, and lymphatic glands are fraught with far less danger than those of the organs of respiration or intestinal tract, excepting fistulæ in ano, the products of which are speedily expelled. Tuberculoses of the urinary organs are less favourably placed, but the testicle may be easily removed, provided the spermatic cord be not involved.

The susceptibility to tuberculous infection is confined to certain individuals, and in them to certain times and particular organs. In those countries where tubercular diseases are most prevalent, every one must be at times exposed to infection, though without any result.

Those forms which come under the notice of the surgeon are mostly acquired by hereditary predisposition, though the statistical materials available in hospital practice are very scanty, the lower classes being generally ignorant of their family history; but the private practitioner knows well that fungous inflammation of the joints, caries, scrofulous glands, &c., do not occur in perfectly healthy families.

Tuberculous diseases often occur in multiple forms, either from—*a*, simultaneous deposition in several parts, as in spina ventosa among the chronic forms, and in some cases of acute miliary tuberculosis; or *b*, in consequence of successive and independent infection. Thus a person may suffer from tuberculous glands in childhood, from white swelling in youth, and die at thirty years from pulmonary consumption, indicating a peculiar susceptibility to the virus.

There is, therefore, no reason to attribute to secondary self-infection subsequent manifestations of tuberculosis. Such an origin is limited to the cases mentioned above under the head of 'extension.'

The operative removal of a tuberculous focus cannot possibly be the means of setting up general miliary tuberculosis or of infecting neighbouring parts, but it does not render the patient exempt from a subsequent and fresh infection. Local recurrence after an operation and fungosity of the wound are not, as was formerly supposed, the evidence of a tubercular or scrofulous 'diathesis,' but simply of the incompleteness of the removal of infected tissues. No such fungosities or other tuberculous processes ever make their appearance on the stumps after amputation of sound limbs, even in cases of advanced tuberculosis; indeed, the emaciated flaps often unite readily by first intention; and the same holds good of other operations in scrofulous children. Yet most tuberculoses of bones and joints are almost sure to recur after injuries, not only after severe ones, but after slight contusions and sprains, which in insusceptible persons would lead to no furthur consequences. Sprains of the wrist and ankle often set up tubercular disease, and in children spondylitis sometimes follows a blow or fall. The active inflammation attending the reparative process after graver injuries, seems antagonistic to the development of bacilli, which find in merely serous or sanguineous effusions a favourable soil.

The mutual relations of tuberculisation and suppuration are full of practical interest, but are far from being worked out. Tuberculoses affect different organs and tissues in children and in adults; but even more remarkable is the tendency of tuberculoses, especially of the bones in children, to become circumscribed, and to heal with little or no suppuration, or even spontaneously, as well as the far less frequency with which tuberculoses of external organs lead to fatal tuberculosis of the lungs.

The question of the identity of scrofula and tuberculosis is not finally settled. Dr. Volkmann has detected the bacilli in the epithelium scraped from a cutaneous affection which every dermatologist who had seen it had described as eczema; but few persons have logically formulated their ideas on the meaning of the terms. Probably tuberculosis suggests to most an actual localised disease, and scrofula an abnormal state of nutrition, a hereditary tendency or susceptibility to scrofulous affections, even though there may be at the time no appreciable deviation from normal health.

Certain drugs have undoubtedly the greatest value, indeed, a specific action, in the local treatment of tuberculised tissues; such are mercury, iodoform, iodine, arsenic, and lactic acid in lupus; and not less marked is the influence of these and others administered internally on the progress of the disease. But more extended comparative observations are urgently needed. E. F. WILLOUGHBY, M.B.

THE Hygienic Section in the Exposition du Travail in Paris includes pharmaceutical and chemical substances, hygienic appliances and inventions. A large space is allotted to mineral waters. The comité de patronage is composed of members of the Institut and scientific men. M. Bert is its president.

ARTICLE 4540.

FIEDLER ON THE EMPLOYMENT OF GLYCERINE IN TRICHINOSIS.*

THAT contact with glycerine, as in mounting specimens for the microscope, is almost instantly fatal to trichinæ has been known for more than twenty years, and obviously suggested the possibility of employing it as an antidote or remedy in trichinosis. Dr. Fiedler has endeavoured, though as yet without success, to carry out this treatment experimentally and clinically.

Having fed guinea-pigs on trichinous flesh, he injected on several occasions, at intervals of three to five days, 15 grammes of pure glycerine, but both animals died from the effects of the parasite. This was in 1863; but a case recently reported by Merkel, in which the use of glycerine seemed to have arrested the disease, induced Dr. Fiedler to reconsider the question. It is a well-known fact that large doses of glycerine will lead to hæmoglobinuria and other toxic effects, but the gravity of the affection would, he believes, justify the administration of 150 to 200 grammes of glycerine daily in tablespoon doses, although a sensation of thirst and burning might follow. The ordinary glycerine of commerce contains 6 to 10 per cent. of water, and he would recommend the use of the purest water-free preparation (Sarg's) in teaspoon doses, diluted at the time with an equal volume of water, since the common glycerine is apt on keeping to generate formic acid, &c.

Unfortunately, most cases of trichinosis come under observation at too late a stage for any such treatment to be of avail. From experiments on rabbits, it appears that the immigration of the embryos into the tissues begins about nine or ten days after the ingestion of the diseased flesh, and continues to the thirtieth or thirty-fourth, being most active towards the end of the second and the beginning of the third week, and such is probably the case in man. After the fourth or fifth week, when they are already encysted, no results can be hoped for from any treatment.

[Fortunately, the first period during which the liberated trichinæ are free in the bowels, and are actively reproducing their species, is marked by gastro-intestinal irritation, pain, and diarrhœa. The authors of the report on Trichinæ and Trichinosis, issued by the Marine Hospital Department of the United States Government, by far the most complete monograph on the subject, recommend that in every case of diarrhœa, &c., following the eating of pork or ham, the bowels should be repeatedly cleared by castor-oil, so as to reduce as far as possible the number that may gain access to the veins and tissues. They also suggest that observations be made with a view to ascertain the relative efficacy of the various anthelmintics which might be administered at the same time. Glycerine certainly merits a trial, but a *sine quâ non* in its employment would be that the stomach should be as far as possible empty of fluid, for its action on the parasite depends on its affinity for water, which it abstracts from the body of the worm, and if saturated by any fluid already in the stomach it would be comparatively or quite ineffective. It has, in like manner, been recently recommended for tænia.—*Rep.*]

E. F. WILLOUGHBY, M.B.

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* *Wiener Med. Blätter*, 1885, No. 25.

Article 4541.

SPEHL ON THE DISTRIBUTION OF THE BLOOD CIRCULATING IN THE SYSTEM.

The object of the author in this work is to inquire into the amount of blood contained in some of the principal organs during life, to establish experimentally the invariableness of these quantities or their fluctuation in correspondence to varying states of these organs, in the latter case to ascertain when and how they vary within physiological limits, and finally to draw certain practical deductions from his results.

The author commences with an account of his method, which comprises two steps; firstly, the removal of the organ with all the blood contained in it at any given moment; and, secondly, the subsequent estimation of the amount of the contained blood. In order to accomplish the first step, ligatures are placed round the afferent and efferent vessels of the organ, and the flow of blood arrested in both simultaneously. The organ is then extirpated. The first step, then, is comparatively simple; the second presents a more complicated problem, and, before describing his own method, the author passes in review those of other writers, including Lehmann, Weber, Vierordt, Malassez, Hayem, Welcker, and others.

The author's method consists in preparing a standard solution of blood, extirpating the organ selected, extracting from it by repeated washings all the contained blood, and by a comparison with the standard solution estimating its amount. The various operations required are as follows.

1. *Preparation of Standard Solution.*—This consists of a mixture of 1·0 cubic centimètre of blood obtained from the left common carotid artery, with 1 litre of 0·5 per cent. solution of sulphate of soda. The mixture is carefully beaten with glass rods to prevent the formation of fibrinous flocculi which, taking up a certain amount of the colouring matter, become a source of error.

2. *Removal of Organ.*—This has already been alluded to.

3. *Extraction of Blood.*—The organ having been removed is weighed, and cut up into small pieces, which are crushed and added to a quantity of the 0·5 per cent. solution of sulphate of soda. The mixture is left to stand for an hour, a procedure on which the author insists as much facilitating the extraction. At the termination of this time the mixture is carefully worked up and squeezed through fine meshed linen, until the solid remnants are quite dry and white.

4. *Filtration.*—The fluid thus obtained is not perfectly clear, but contains very small fragments of tissue, which have passed through the linen, and fat-globules. The latter are especially objectionable, as they alter the tint sensibly. It is therefore necessary to filter a certain quantity (about 20 cubic centimètres) until perfectly clear and limpid.

5. *Comparative Examination of the two Solutions.*—This is effected in two tubes, each capable of containing 100 cubic centimètres, and 1 centimètre in diameter. One of these is filled with 100 centimètres of the standard, and into the other are poured 10 cubic centimètres of the solution, obtained by washing the organ. To this latter, water is added until its tint exactly coincides with that of the other solution.

6. *Deduction of the Quantity of Blood contained in the extirpated Organ.*—For this calculation, all the necessary elements have been obtained by the foregoing operations.

A series of control experiments by means of Dubosq's colorimeter and by the enumeration of corpuscles have proved the exactness of the results obtained by the author's method.

Thus far the first portion of the work; the second is occupied with an account of experiments on various organs, which it will be unnecessary to describe in detail. The results obtained by the author, briefly recapitulated, are as follows.

I. *Lungs.*—1. During inspiration these contain about one-thirteenth of the total amount of blood. 2. During expiration about one-eighteenth. (These experiments were made on rabbits.) 3. These values are not influenced by varying pressure in the heart during normal respiration. 4. An insufflation of compressed air (6 centimètres of mercury) in the trachea, the external pressure remaining the same, drives the blood contained in the lungs out so as to reduce its ratio to one-sixtieth. In connection with his study of these organs, the author has also investigated the effect upon the pulmonary circulation of residence in and ascent to high altitudes, and has come to the following conclusions. (*a*) During a sojourn in a rarefied atmosphere the division of the blood is physiological, and consequently the same as at the sea-level. (*b*) During ascent there is a tendency to congestion of the lungs, and, *cæteris paribus*, this congestion is the more marked and persistent the more rapid the ascent may be.

II. *Brain.*—During the waking state this organ contains on an average one-eighth of the total mass of blood, during sleep the one-twelfth.

III. *Muscles.*—These contain more blood during contraction than during repose. One-sixth to one-tenth of the total mass are the extreme figures found. Bertram C. A. Windle, M.D.

Article 4542.

OBERST ON LAPAROTOMY IN CASES OF PERFORATIVE PERITONITIS.

Prof. M. Oberst, of Halle, in a paper on a case of perforative peritonitis treated by laparotomy (*Centralbl. für Chirurg.*, No. 20, 1885), states, with regard to the operative treatment of acute septic peritonitis, that a favourable result from incision, antiseptic cleansing, and drainage, can be expected only in cases in which either the infective focus has been localised through adhesive inflammation and a more or less circumscribed abscess has been formed, or when, with diffuse peritonitis, operative treatment has been applied early, and before the formation of extensive adhesions between the coils of intestine. In most cases, however, of acute septic peritonitis, it is difficult to make out whether the inflammation be diffused or circumscribed, and in the latter case there would be a risk, in the performance of laparotomy, of breaking down the adhesions by which the infective material is confined. In acute peritonitis, due to intestinal perforation, the diagnosis is not, as a rule, attended with any special difficulty. Acute peritonitis sets in with unmistakable symptoms, and experience teaches that, with treatment of an expectant character, or applied simply to symptoms, death almost invariably ensues, as a result of diffused inflammation of the serous membrane. It is thought that, by performing an early laparotomy in cases of this kind, and by washing out the peritoneal cavity and closing the wound in the intestine, many a life that would otherwise be surely doomed might be saved. A successful instance of such treatment has been recorded by Mikulicz. The patient was a man, aged 40, who, during a rapid movement, was seized with pain in the abdomen; and very soon afterwards presented symptoms of ileus and peritonitis. Seventy-two hours after the occurrence of the first symptoms, Mikulicz performed laparotomy, and found in the abdominal cavity nearly two pints of fœtid pus and some undigested pieces of potato. A perforation, about 6 centimètres in length and 4 centimètres in breadth, was found in the ileum. The margins of this were cut away, and the opening then closed by a dozen silken sutures. The peritoneal cavity was carefully cleansed, and the external wound closed by sutures. The perforation in this case had occurred, Mikulicz thinks, at the seat of a typhoid ulcer.

The case recorded by Professor Oberst is one which commenced in strangulation of an old scrotal hernia. The patient, aged 48 years, was admitted into the Hospital at Halle on the fourth day, and then was much collapsed and presented symptoms of intense peritonitis. Herniotomy was at once performed, but it was found that the sac, which was much distended by turbid and fœtid fluid, did not contain any intestine. On opening the abdominal cavity by an incision which reached as far as the umbilicus, a considerable quantity of purulent fluid was set free; and the intestines were found much distended, and covered by a thick deposit of recent inflammatory lymph by which adjacent coils were glued together. After a prolonged search a small orifice, from which exuded fæcal fluid, was found in a loop of intestine deeply secluded in the abdominal cavity. The intestine was completely divided at the seat of this lesion, and the two ends fixed by sutures to the margins of the external wound to form an artificial anus. The cavity was then washed out with a warm solution of salicylic acid, and the inflammatory deposit scraped away from the surface of the intestines. After several drainage-tubes had been inserted into the peritoneal cavity, the external wound was closed by sutures. The patient rapidly recovered from the collapse, and during the first two weeks after the operation progressed favourably. Subsequently he became very weak, and in the ninth week died from extreme exhaustion, the fatal result having been accelerated by hypostatic pneumonia and the effects of decubitus. W. JOHNSON SMITH.

ARTICLE 4543.

MIKHAILOVA ON INCISION OF THE PERICARDIUM IN PURULENT PERICARDITIS.

AT a recent meeting of the Moscow Russian Medical Society, Dr. Ekaterina A. Mikhailova communicated (*Meditz. Obozr.*, Fasc. v., 1885) an interesting case of purulent pericarditis of traumatic origin, treated by tapping and incision of the pericardium.

The patient, a cook, aged 35, who had for many years suffered from cardiac palpitation and rheumatic pain in the right side of the chest, was admitted to the Staro-Ekaterinensky Hospital five days after a fall from considerable height. For the first day after the accident, the patient had remained in an unconscious state; on return of consciousness on the second day, she had tried to get up and to resume her usual work, but had found herself unfit for anything on account of giddiness and intense attacks of palpitation.

On admission, she looked pale, anæmic, and exhausted; the tongue was whitish, moist; pulse small, 90; temperature, 39° C. The chest was normally developed, its excursions being equal on both sides, though not energetic. The apex-beat was not visible, and hardly perceptible to the touch. The cardiac dulness commenced from the third rib; its left border passed slightly beyond the nipple line, the right reached the median line, and the lower extended downwards to the sixth rib. The heart-sounds were feeble, but otherwise normal. A dull area was detected over the posterior aspect of the right side of the chest, extending from the scapular angle down to the lower border of the lung. Auscultation revealed there enfeebled vesicular respiration. The patient could not lie on her right side, on account of dyspnœa being increased.

For the next eight days the patient's state remained much the same; on the ninth there appeared intense dyspnœa, and cyanosis of the lips and nose; the pulse became much smaller and intermittent, 120; the urine contained much albumen, pus-corpuscles, and hyaline casts. On examining the patient on her back, the cardiac dulness now commenced from the lower edge of the second rib, extended on the left to the anterior axillary line, and went on the right slightly farther than the right edge of the sternum, the lower border remaining at the sixth rib. The apex-beat could not be felt any more; the heart-sounds were clear, but very feeble and intermittent. On the fourteenth day, œdema of the subcutaneous tissue in the præcordial region was noticed.

The cardiac symptoms steadily growing worse, on the fifteenth day aspiration with Dieulafoy's apparatus was performed in the fourth intercostal space, and 120 cubic centimètres of fluid drawn off. The first 80 cubic centimètres consisted of pure cream-like pus, the remaining 40 almost entirely of blood. Immediately after the puncture, the patient was in a state of semi-collapse, but on the next day there was noted a slight improvement in the subjective symptoms. On the seventeenth day the cardiac dulness reached up as far as the clavicle, the pulse became scarcely perceptible, the dyspnœa extreme; the lungs were full of mucous *râles*. To satisfy the vital indication, incision of the pericardium was decided upon and performed by Drs. P. P. Minin and Hindenburg. It measured about 2 centimètres in length, its spot being close to the left edge of the sternum, in the fourth intercostal space. About two fluid pounds of fœtid blood-stained pus escaped. After washing out the pericardial cavity with boracic water (at 38° C.), a drainage-tube was inserted, and the carbolic gauze applied. Striking relief immediately followed; the dyspnœa diminished, the pulse became regular and 90; the cardiac dulness normal. However, in spite of three successive subcutaneous injections of ethereal tincture of valerian, the cardiac action remained low, and eighteen hours after the operation the patient died.

At the *post mortem* examination, there were found fatty degeneration of the cardiac muscle, dilatation of the cardiac cavities, considerable old fibrinous thickening of the pericardium, fibrinopurulent exudation with admixture of blood in the pericardial sac, right hydrothorax, total obliteration of the left pleural cavity, œdema of the lungs with purulent bronchitis, marantic thrombosis of the pelvic veins and of the vena spermatica interna dextra, ischæmic necrosis of the right kidney; the same, but in a less advanced stage, in the left kidney. A search for bacilli in the heart and pericardium gave negative results.

Analysing the details of the case, Dr. Mikhailova arrives at the conclusion that she had to deal with an instance of idiopathic purulent pericarditis caused by injury. Pointing to the fact that in her case (like in the case of Partzevsky, for which *see* the LONDON MEDICAL RECORD, Feb. 1883, p. 33) the operation was resorted to too late, the author states her belief that incision of the pericardium in cases of purulent pericarditis may be followed by a favourable issue only when it is undertaken in presence of a healthy cardiac muscle. On the other hand, however, she seemingly admits Professor Rose's dictum that, as a rule, incision of the pericardial sac in purulent pericarditis has the same therapeutic value as tracheotomy in certain affections of the respiratory organs.

V. IDELSON, M.D.

ARTICLE 4544.

SÜSLIN ON HEPATOTOMY IN A CASE OF HYDATID CYSTS OF THE LIVER AND PLEURA.

DR. N. N. SÜSLIN has communicated to the Kazan Medical Society (*Dnevnik Kazanskaho Obshtchestva Vratchey*, No. 5, 1885) the following interesting case, which was treated and cured in Professor L. L. Levshin's clinic.

A previously healthy girl, aged 22, two years ago noticed a lump in her right hypochondrium, which commenced to steadily grow larger. For about a year the tumour gave her no special trouble; but after an attack of relapsing fever, nine months before her admission to the clinic, there appeared a sensation of fulness and dragging under the ribs and in the epigastrium, and, later on, intense pain in her left side, slight fever, jaundice, dyspnœa, gastric disturbances, aching in the lower limbs.

On examination, a tense, elastic, tender tumour, about the size of a man's fist, was found in the right side of the epigastric region; it followed the respiratory movements, and was not adherent to the abdominal wall. The area of hepatic dulness was considerably enlarged. The apex-beat was felt in the fourth intercostal space along the left parasternal line. Percussion over the left side of the chest determined an area of dulness, commencing anteriorly from the sixth rib (both along the axillary line and between the latter and mammillary line), and posteriorly from the scapular angle, the breath-sounds in the latter region being feeble.

Two exploratory punctures, one in the seventh intercostal space along the left axillary line, another in the epigastrium, drew off a transparent fluid containing large quantities of chloride of sodium, but no albumen or hooklets. A hydatid cyst was recognised, and an operation, divided into two stages, after Volkmann's plan, was decided upon. Accordingly, a free incision through the whole thickness of the abdominal wall (including the peritoneum) was made over the most prominent spot of the tumour, in the epigastrium, close to the median line. The hydatid cyst being exposed, the wound was filled up with iodoform gauze, and Lister's dressing (with wood-wool treated by a 0·2 per cent. solution of corrosive sublimate) was applied. The operation was performed without chloroform, only Richardson's ether-spray being used locally.

Four days later, the dressing was removed; the edges of the abdominal wound being found firmly adherent to the walls of the cyst, the latter was opened with a free incision. A large quantity of transparent fluid escaped. The wall of the cyst measured about three fingers' breadth in thickness, and consisted mainly of the thickened and firm parenchyma of the liver. A stout drainage-tube was introduced, and a dressing of sublimatised wood-wool applied. The dressing was changed daily, the cavity of the cyst being washed out with a 0·5 per cent. solution of chloride of zinc. In spite of all the antiseptic measures, the discharge became purulent and offensive, and the temperature stood at 38°·5 C. in the morning and at 39°·5 C. in the evening. On the tenth day (after laparotomy), the maternal cyst, as large as a water-melon, was extracted *in toto*. Still, the temperature, after a temporary fall, remained high. Five days later, a second somewhat smaller cyst was removed, the removal being followed by a profuse discharge of fœtid pus. On introducing a finger into the hepatic cavity, the author reached a hole situated in the diaphragm, and, pushing on through it, was able to penetrate into the left side of the thoracic cavity, where his finger was arrested by the pericardium. An attempt at establishing drainage of the chest, through the hole in the diaphragm, was made, but it was given up in fifteen minutes, since the patient became extremely restless, the pulse fell, laboured breathing appeared, &c., all of which symptoms disappeared immediately after the withdrawal of the drainage-tube from the diaphragm. From this moment, interrupted improvement commenced. The temperature fell at once to the normal level; the pus became sweet. On the twenty-fourth day the patient got up; on the twenty-ninth, the drainage-tube was removed; on the thirty-fifth, the wound closed and the patient left the hospital. Whether the thoracic cyst developed independently from the hepatic, or was only a continuation of the latter through perforations of the diaphragm, the author does not pretend to know.

V. IDELSON, M.D.

ARTICLE 4545.

LARÏONOFF, RUBINOVITCH, DMITRIEFF, AND BOTKIN ON MOVABLE LIVER.

IN the *Ejenedelnaia Klinitcheskaia Gazeta*, No. 2, 1885, p. 31, Dr. M. Larïonoff, of Voltchansk, Kharkov Government, describes a very rare case of floating liver, which he had an opportunity of observing conjointly with Drs. Popoff and Hagenthorn. The patient, a middle-aged married woman, of tall stature and fair general nutrition, applied to the author on account of her being anxious to learn whether chalk-eating might do any harm to her system, the patient ingesting about a pound of chalk daily for several last years. In the course of conversation, she mentioned incidentally about her having an abdominal tumour, which had made its appearance ten years ago immediately after her last labour (normal and at full term). The tumour did not trouble her at all, except when she had to lift any heavy object, the exertion being accompanied by considerable pain deeply seated in the belly above the navel. On examination, the tumour was lying, with its longest diameter transversely, in the lower part of the belly, its smooth anterior surface being just under the anterior abdominal wall. Its upper and thicker border reached the umbilical level in the recumbent position of the patient, and descended about two fingers' breadth below the navel when the patient stood up. The lower border, which was comparatively thin and convex, touched the pubes when she was lying, and slightly descended behind the pubes when she rose. The tumour was easily movable to the right and left, and but partly downwards. No dulness existed in the normal site of the liver, percussion producing a partly tympanitic, partly pulmonary sound. Palpation did not detect any resistent body in the right hypochondrium. Dr. Larïonoff (as well as his colleagues) recognised the tumour as dislocated liver, the diagnosis being grounded on *a*, absence of the hepatic dulness in its usual site ; *b*, the characteristic shape of the tumour ; and *c*, absence of all signs pointing to existence of any new growth in the abdominal cavity.

In the *Voenno Meditzinsky Jürnal*, February 1884, p. 37, Dr. V. Rubinovitch, of Tiraspol, Kherson Government, details at considerable length the case of a soldier, aged 42, of middle height and build, who three years ago, after prolonged wood-hewing, had been suddenly seized with abdominal pain, and had found a tumour, about the size of a hen's egg, in his right hypochondrium. From that day he had never been entirely free from dragging pain, which increased in the erect position, and especially during work, when, in addition, there appeared pain also in the sternal and right scapular regions, as well as along the right upper limb ; the pain during work was very often accompanied by giddiness and numbness in the limbs. On examination of the patient in the erect position, the hepatic dulness extended from the eighth rib along the mammillary line, from the tenth along the axillary, and from the lower border of the costal arch along the parasternal line. The whole right side of the belly was bulging and tense ; on the left side the abdominal bulging had the shape of a triangle, the base of which was situated along the median line, and the apex touched a point at the mammillary line. The percussion-note all over the projected region was absolutely dull. Pulsation revealed the presence of a firm, hard, painless, heavy body of the size and form of the liver. According to the author's description, the liver was not only dislocated downwards, but also, to a certain degree, turned round its transversal and longitudinal axes (as represented by the coronary and suspensory ligaments). The superior surface of the viscus lay immediately under the anterior abdominal wall ; the anterior border of the right lobe was felt at a level 20 centimètres from the costal arch along the parasternal line ; the posterior border looked upwards, touching the costal arch between the axillary and mammillary lines. When the patient resumed the recumbent position, the liver at once, spontaneously and completely, returned to its normal situation in the right hypochondrium. On a deep and prolonged inspiration, the viscus again emerged from its abode and descended as low as when he was in the upright position. On expiration, it could be easily reduced with help of slight pressure on the abdominal wall (whilst, in the erect position, the dislocated liver was irreducible). The liver was apparently of normal size and consistency, and there were no gastric disturbances of any kind present. All other organs were healthy, except the lungs, in which moderate emphysema, especially of the right lung, was detected. As the author argues, the pulmonary affection stood in direct etiological connection with the dragging action of the dislocated liver on the diaphragm. The patient was ultimately recognised as unfit for further military service on account of his having wandering liver, and dismissed accordingly.

In the *Ejened. Klin. Gazeta*, No. 33, 1884, p. 522, Dr. A. N. Dmitrieff publishes the case of a woman, aged 51, who had been married at 15 and had had twelve children, the last time labour having occurred at 44. At 25, the patient had aborted after a fall from a high Russian stove ; henceforward there began to occur paroxysms of dragging abdominal pain, which invariably increased during work, but could be controlled by tightly tying the belly at the level of the lower ribs. Up to the age of 44 the pain was bearable, but after the last labour it increased both in intensity and in frequency, and simultaneously a tumour appeared in the right side of the abdomen. For the last seven months paroxysms of pain became extremely frequent, and were accompanied by cardiac palpitation, oppression in the chest, cold perspiration, and general weakness. The last attack, on account of which the author was called, had been caused by the patient lifting several pails of water from a well; it had been unusually severe, and followed by loss of consciousness, with vomiting and convulsions in the limbs. On examination, an abdominal tumour was found, and recognised by the author as wandering liver (hepar ambulans), which not only had descended downwards, but also rotated round its axis, the inferior surface of the organ looking downwards and forwards, and the right lobe lying lower than the left. The percussion-note from the sixth to the ninth right rib was tympanitic, the hepatic dulness commencing from the ninth rib. The dislocated viscus could be but partly reduced. Discussing the etiology of the case, Dr. Dmitrieff comes to the conclusion that twelve pregnancies (which produced extreme flabbiness and weakness of the abdominal wall), as well as hard domestic work and a fall from a height, played an important part in originating the dislocation of the liver in his patient. He does not exclude, however, the possibility that a predisposing cause in the shape of congenital elongation of the suspensory and coronary ligaments might be present.

In a clinical lecture, Professor S. P. Botkin, of St. Petersburg (*Ejened. Klin. Gazeta*, No. 37, 1884), states that cases of movable liver are by far not so rare as one might conclude from text-books. As a matter of fact, he comes across two or three cases of the kind year by year. As to slighter degrees of mobility of the liver, they are met very often, but nearly as often are mistaken for an enlargement of the organ.

The author has in view cases where the liver, becoming heavy in consequence of congestion or biliary stasis, or of the presence of a tumour, may project at about three finger-breadths from under the ribs when the patient is examined in a standing position, and may be easily pushed upwards under the ribs when the patient resumes a horizontal position. Not unfrequently this very limited mobility of the liver, combined with rotation of the organ forwards, may be only temporary, as one may observe in patients with temporary hepatic congestion or biliary stasis.

The subject of the author's lecture (concerning only comparatively rare cases of true movable liver) was a young woman who had been married four years, and had aborted three times. She had suffered from acute peritonitis after her first abortion, and since then had never been well. The following symptoms were present: dyspnœa, which occurred on walking and disappeared only on assuming a sitting position; epigastric pain and oppression; anorexia, dyspepsia, constipation alternatively with diarrhœa (the former predominating); jaundice, mental irritation, easily interrupted sleep, general weakness. On examination, there was found a tumour of the size, shape, and consistency of the liver, which occupied the whole upper part of the abdomen, passing beyond the left mammillary line and extending downwards to about six finger-breadths from the false ribs on the left side, close to the navel along the median line, and to about three finger-breadths below the umbilical level on the right side. The lower border of the tumour presented a notch, which was situated correspondingly to the navel. The tumour could not be displaced, either upwards or in lateral directions; but it descended *in toto* on inspiratory movements. As the author supposes, the liver was fixed, as well as (to all probability) dislocated, by cicatricial products left in the peritoneum and mesentery by acute peritonitis (after the first miscarriage). He thinks possible, also, that there existed a predisposing cause in its usual shape—congenital elongation or diminished elasticity of the hepatic ligaments.

The treatment, recommended by Professor Botkin in the case above, consisted of—(*a*) rest, physical and mental; (*b*) careful and cautious massage of the abdomen from the right to the left, two ten minutes' sittings daily, to control peristalsis; (*c*) the administration of turpentine with ether after the following formula: ℞ Olei terebinth. rectific. ʒj.; spirit. anodyni Hoffmanni, ℥j. M. (five or ten drops three times a day, to correct the gastric functions); (*d*) the administration of monobromate of camphor with chloral, after the formula—℞ Chloral. hydr. et camph. monobrom. āā., ʒj.; sacchari et gummi Arabici q.s. ut fiant pil. 60 (one pill three times daily, as a sedative); and (*e*) lukewarm baths.

[Cases of movable liver have been published, also, by the following Russian authors. 1. Sutugin, in the *Meditzinsky Vestnik*, 1875; a female case. 2. N., Vasilieff, in Botkin's *Arkhiv Kliniky Vnutrennikh Bolezney*, 1875, vol. v., part 2, p. 315. Four cases, two in women, two in men. 3. H. Rodzewicz, of Nijni-Novgorod, in the *St. Petersburg. Med. Wochensch.*, 1879, No. 35. The patient was a young woman, who had a habit of too tightly lacing her stays, especially during pregnancy. The dislocation developed suddenly five weeks after labour, when the patient rode in 'a shaky vehicle along a horrible road.' 4. Sniatkoff, of Vologda, in the *Meditz. Obozr.*, Aug. 1880, p. 133. The patient was a male, a shoemaker, aged 21. The digestion and spleen were normal. Etiology remained unknown. 5. N. P. Simanovsky, of Professor S. P. Botkin's clinic, in the *Ejened. Klin. Gazeta*, No. 5, p. 65, and No. 6, p. 81, 1882. Two female cases, one of which was that of a laundress, aged 53, who died in the hospital. The necropsy fully confirmed the diagnosis made during her life. Contrary to expectation, the dislocated liver was found very small. The gall-bladder was larger than a goose's egg, and dropsical. The ductus choledochus was absolutely obstructed by a stone, and buried in a mass of cicatricial tissue. The great omentum, as well as the mesentery of the small bowel, were disfigured and shrivelled, being transformed into a huge cicatricial mass. According to the explanation of Professor Botkin, the course of events in this case was as follows: incarceration of the gall-stone in the duct, subsequent reactive chronic inflammation of the surrounding tissues, retraction of the cicatricial tissue, and dislocation of the liver downwards, as a direct consequence of the retraction. Another case was that of a seamstress, aged 40, single and nullipara, with wandering liver of two years' standing, and probably of the same etiology as in the first case.—*Rep.*] V. Idelson, M.D.

Article 4546.

TRUSEWICZ ON THE INTERNAL AND SUBCUTANEOUS ADMINISTRATION OF KAIRIN ALONE, OR SIMULTANEOUSLY WITH CARBOLIC ENEMATA.

In the *Vratch*, Nos. 39, 40, 42, and 45, 1884, Dr. Jakov J. Trusewicz details the therapeutic experiments which were undertaken by him in the Cronstadt Marine Hospital in order to study the antipyretic action of kairin, 1, administered internally; 2, injected under the skin; and 3, given internally, simultaneously with the administration of carbolic acid through the rectum.

1. *The Internal Administration of Kairin* was studied in twelve patients with erysipelas (mostly facial). Thirty-three observations were made, in one group of which eight-grain doses of kairin were given to the patients, with the maximal temperature of 39°·9 C. In another group, sixteen-grain doses were taken by the patients, with the temperature under 40° C.; and in a third group, the latter doses of the drug were administered to the patients, with the temperature not less than 40° C. The general conclusion drawn by the author from this series of experiments is this. The strongest and most stabile antipyretic effect from kairin given internally may be expected in cases of moderate fever (under 40° C.), where the drug is used in not less than sixteen-grain doses. In cases of higher fever and smaller doses, the fall of the temperature is only temporary. Beginning within half an hour after the administration of the drug, and reaching its maximum in two hours, it gives place to a reactionary re-elevation, which ascends to its maximal level in three or four hours after the ingestion, and then again dwindles down. The reactionary re-elevation of the febrile curve (which is often associated with rigors) is, however, less considerable than that which is observed under the treatment of fever by carbolic enemata alone. As far as the author's experience goes, kairin does not give rise to any unpleasant accessory symptoms, such as loss of appetite, nausea, gastric gain, diarrhœa, headache, giddiness, &c., which are occasionally observed on the use of carbolic acid and quinine. He did not see, also, any cumulative action even after a prolonged use of the drug.

2. *The Hypodermic Use of Kairin* was experimented

upon in fourteen patients, eight of whom suffered from erysipelas, and the remaining six from pleuritis, croupous pneumonia, typhlitis, hepatic suppuration, acute pulmonary tuberculosis. This series of observations, forty in number, is again subdivided in three groups, in one of which eight-grain doses of kairin were injected into the patients, with the temperature from 38° to 39°·4 C.; in another, sixteen-grain doses were injected into patients, with a temperature from 39°·5 to 40° C.; and in a third, two sixteen-grain doses were injected, with an interval of half-an-hour, into patients with the temperature over 40° C.

The outcome of these observations is as follows. In cases where the temperature is under 40° C., a hypodermic injection of eight to sixteen grains of kairin does not lower the temperature any more energetically than the internal administration of the same doses of the drug. As to the cases of higher fever, an internal dose of sixteen grains of kairin produces the same effect as a double one injected under the skin. Referring to the procedure itself, the author states that the injection of kairin causes but trifling pain, and does not leave any untoward consequences (however, in two of forty cases temporary infiltration of the tissues at the spot of the injection ensued).

[Dr. Queirolo thinks rather differently, as may be seen from his article on the hypodermic injection of kairin in the London Medical Record, 1884, March. p. 115.]

3. *The Simultaneous Administration of Kairin through the Mouth, and of Carbolic Acid through the Rectum.*—Twenty-five observations in ten erysipelatous patients were made. In one group, the patients, with fever under 40° C., received eight grains of kairin internally and two ounces of a 4 per cent. solution of crystalline carbolic acid through the rectum; in another group, comprising the cases with 40° C., sixteen grains of kairin and two ounces of the carbolic solution were used; and in a third group, consisting of the cases with the temperature over 40° C., either eight grains of kairin and two ounces of the carbolic solution, or sixteen grains of kairin and three ounces of the solution, were administered. Analysing the results, Dr. Trusewicz emphatically states that the combined administration of kairin and carbolic acid supplies us with a strikingly energetic antipyretic agent of rapid action and stabile effect. In the author's cases, which presented an average original temperature of 39°·4 C., the average fall after the combined use of kairin and phenol was 2°·3 C., the maximum 4°·4 C. The depression of the febrile temperature reached its maximum in three hours after the administration, the original temperature being not reached even two hours later.

V. Idelson, M.D.

Article 4547.

KRIVÏAKIN ON DEEP MASSAGE OF THE ABDOMEN IN INTESTINAL OBSTRUCTION.

In a communication to the Caucasian Medical Society, Dr. Ivan J. Krivīakin, of Botlikh, Dagestan Region, emphatically recommends (*Proceedings of the Caucasian Medical Society*, No. 14, 1884, p. 358) deep massage of the belly as a powerful curative means in cases of intestinal obstruction. The procedure, as practised by the author, 'requires only one assistant, the name of which is Patience,' and consists in the following.

The operator anoints his hands with oil, separates the thumbs as much as possible from the first fingers, puts the thumbs in juxtaposition, places the hands at the lower part of the belly (the patient lying on his back), and, while producing steady and strong pressure, passes his hands first from downwards upwards, then *vice versâ*, then from the right to the left, and so on, repeating the manipulations for twenty minutes, by the end of which time 'a regular peristaltic storm is set up within the abdomen.' Then the patient (who at the beginning of a sitting feels rather uncomfortable, but in about ten minutes commences to experience distinct relief) is left alone for the next one and half hour, when another sitting of deep massage for about fifteen minutes may be tried. As a rule, however, one sitting is sufficient for producing stools. It happens very often that in the course of the manipulations a distinct, usually elongated, sausage-like tumour may be felt in the belly. If this be the case, fairly strong tapping at the spot of the tumour should be added to the shampooing, each stroke being finished by a strong localised pressure.

According to the author, deep massage is indicated in intestinal obstruction of every kind and description. He adduces the details of four cases of the affection met by him lately amongst Dagestanese, and treated after this energetic plan (very energetic, indeed, especially in comparison with foul eggs or a cock's excrements, with which obstructed patients are usually treated by numberless native medical men, so-called *khakims*). One of the cases was that of a strongly built man, aged 24, with constipation of ten days' duration, agonising paroxysmal abdominal pain, fœtid vomiting, obstinate hiccough, offensive eructation, and moderate distension of the belly. A volvulus (caused by severe physical exertions soon after a liberal meal) was diagnosed, and deep massage was resorted to after a large enema made of a weak infusion of tobacco-leaves. In about ten minutes, after a sitting of twenty minutes' duration, very profuse and extremely offensive defecation followed; later on, the patient's bowels were moved five times more. In another case, where constipation of eight days' duration and fæcal vomiting were present, deep massage was performed twice, with an interval of one hour, defecation ensuing during the second sitting. In a third case, with eight days' obstruction and obstinate hiccough, recovery followed after the simultaneous use of deep massage, large enemata, and cold compresses. Less fortunate was the issue in a fourth case, that of a weak, decrepit man, aged 55, with constipation of twelve days' standing, filiform pulse, fœtid vomiting and eructations, cold viscid perspiration, and a semicomatose state. Though regarding the case as a hopeless one, the author still decided to try massage, after the previous administration of two grains of camphor and a high effervescent enema. In about half an hour after the manipulations, a free discharge of hard fæcal lumps, suspended in fluid, ensued. But collapse became worse, and five hours later the old man died. No necropsy was allowed.

During a discussion which followed the reading of Dr. Krivīakin's paper, Dr. J. A. Goralevitch mentioned four cases of intestinal obstruction, in which he had employed massage, squeezing the fæcal masses along the course of the large bowel;

in three of the cases complete recovery had been obtained; the fourth patient had died, though the manipulations had brought about the results desired.

Dr. M. D. Nekrasoff related the case of Dr. Lesnevsky, in whom a profuse intestinal discharge had ensued immediately after a consultation which had been held by sixteen medical men, every one of them having diligently kneaded Lesnevsky's belly in search of the cause of prolonged constipation.

Dr. M. K. Golbeck drew attention to the fact that, twenty-five years ago, shampooing of the abdomen was largely and successfully practised at the Dorpat hospital, the patients in which are mainly Livonian peasantry. Intestinal obstruction among the latter is met as often as among Dagestanese, which fact probably depends upon one and the same cause—the ingestion of rough and indigestible food.

V. Idelson, M.D.

SURGERY.

RECENT PAPERS.

4548. Lund.—Operation for Fistula. (*Brit. Med. Jour.*, June, p. 1284.)

4549. Fenwick. — Fæcal Abscesses. (*Lancet*, July, p. 1.)

4550. Bellamy.—The Treatment of Hydrocele by Section made Antiseptically. (*Lancet*, July, p. 12.)

4551. Barwell.—Varicocele Treated by the Subcutaneous Wire-Loop. (*Lancet*, May, p. 978.)

4552. Grigorieff, Al. Kh.—A Contribution to the Study of Dental Caries. (*Kavkazsky Meditz. Sbornik.*, 1884, No. 39, Fasc. 1, pp. 31-47.)

4553. Neshel, Vasily E.—On Peat-Moss as a Dressing Material. (*Vratch*, No. 24, 1885, pp. 389, 390.)

4554. Schkott.—A Case of Scrotal Calculus. (*Wiener Med. Blätter*, No. 24.)

Art. 4548. *Lund on Operation for Fistula.*—Mr. Edward Lund, in the *Brit. Med. Jour.*, June 1885, p. 1284, gives the following directions for dressing the wound: no water or wet applications are employed during the operation, but dry lint is used to wipe the parts, and carbolised castor-oil is freely applied to protect the cut surfaces from the irritation of fæcal matter and of mucus. To avoid pain during dressing the wound, which the surgeon ought always to do himself, the patient is placed on his left side, with the back to the surgeon. As the cut surfaces are exposed by the removal of old dressing, they are freely painted with the carbolised oil by means of a full-sized camel-hair brush. A strip of lint, about half an inch wide and ten inches long, is then taken and well saturated with oil. It is folded over the end of a short square-ended probe, and held in the right hand, so as to firmly fix it; or two, three, or more strips may be oiled, folded, and placed over the end of the probe. The left forefinger is then well smeared with oil and passed up the bowel, care being taken to keep the palmar aspect of the finger in the incision, the tender part being protected by gently pressing the finger in its whole length against it. The probe, loaded with strips of oiled lint, is then passed along the dorsal aspect of the finger until it is beyond the extreme limit of the incision. When this is done the finger is slowly withdrawn, and then the probe, leaving the lint well fixed by one end high up in the bowel. After this, the lower portion of the lint, which still lies outside the bowel, is guided on to that portion of the cut which appears externally. Dressed thus the patient experiences no pain. A piece of lint, soaked in oil, is placed over the anus and covered with gutta-percha, and a pad is kept in position by a T-shaped bandage

4549. *Fenwick on Fæcal Abscesses.*—In the *Lancet*, July 1885, p. 1, Dr. Samuel Fenwick, speaking of the difficulties besetting the diagnosis of fæcal abscesses, relates the following singular case, where the abscess pointed in the thigh. A boy, aged 14, was admitted in Sept. 1879. For three weeks there had been severe pain in the right iliac fossa, accompanied with still more severe pain in the back, as though 'a knife were being thrust in between his ribs. The bowels were confined, and, when opened by aperient medicine, the pains were relieved. A round tumour, exceedingly tender on pressure, occupied the right iliac fossa. In March he was made an out-patient, the symptoms being unrelieved. In June, having become worse, he was readmitted. In the beginning of July a tumour was noticed in the thigh, which, on being opened, discharged fæcal matter. Eventually he left the hospital cured, after an illness of eleven months.

4550. *Bellamy on the Treatment of Hydrocele by Section made Antiseptically.*—Mr. Edward Bellamy, in the *Lancet*, July 1885, p. 12, claims for this method a larger amount of attention than has yet been bestowed upon it by surgeons generally. The danger is trifling and the cure certain. The operation is carried out as follows. The tumour is firmly grasped to be made as tense as possible. A clean sweep through all the scrotal tissues is then made with the bistoury from the cord to the base. Every bleeding vessel must be scrupulously tied or twisted, and the interior of the sac must be carefully examined for any wounded vessel. The cavity is then filled with lint, soaked in carbolised oil (1 in 40), and the edges of the wound carefully stitched together, a small tag of the stuffing being left out at the most depending part, a pad of salicylic acid being placed over all, and the scrotum supported with a pillow between the thighs. In a couple of days, under spray if thought best, the lint is withdrawn and a fresh dressing inserted, and this plan is continued so long as there exists any appreciable cavity, which is generally about a week. [For papers by Jacobson in 1877, and Lister in 1881, see *Medical Digest*, sects. 1226 : 5.—*Rep.*]

4551. *Barwell on Varicocele Treated by the Subcutaneous Wire-Loop.*—In the *Lancet*, May 1885, p. 978, Mr. R. Barwell gives an abstract of 100 cases of varicocele treated by the subcutaneous wire-loop. In none of these did the operation produce bleeding, shivering, pyrexia, or erysipelas. In 16 there was slight suppuration, but the pus found its way out along the wires in every case but one; in this case a small abscess formed in the scrotum and was evacuated by a slight incision. In 12 there was a little ulceration caused by the shield through which the ends of the wire are passed; this healed very readily. In 1 there was some orchitis, which lasted five days. In 71 there were no complications at all. The wire takes from eight to sixteen days before it comes away. The operation is almost painless, except at the moment of tightening the wires. The results of this operation are extremely good, and it is an easy and safe method of procedure.

Richard Neale, M.D.

4552. *Grigorieff on Dental Caries.*—In the *Kavkazsky Meditz. Sbornik.*, 1885, No. 39, Fasc. 1, p. 31, Dr. Al. Kh. Grigorieff, of Temir-Khan-Shura, Dagestan Region, publishes the results of his examination of the teeth in 800 soldiers, aged from 17 to 31. In 262 (32·75 per cent.) of them dental caries was found, the number of the teeth affected being 635, or about 2·4 teeth per mouth. The left lower third molar tooth was the most often destroyed (17·9 per cent. of the whole number of various teeth); then the right ditto (14·6 per cent.); then the right upper ditto (11·6 per cent.), and so on, the last place being occupied by the lower canine teeth (0·2 per cent. and 0·0 per cent.). The lower teeth were attacked by far more often (63 per cent.) than the upper (37 per cent.), and the left slightly more often (51·5 per cent.) than the right (48·5 per cent.). The teeth in fair-haired persons were found more subject to caries (33·9 per cent.) than in brown-haired (32·8 per cent) or black-haired (32·3 per cent.). The number of the teeth destroyed steadily increased with the age. Having inquired into the influence of occupations (before entering military service), the author found that husbandmen and shepherds suffered less from dental caries (29·7 resp. 0·0 per cent.) than artisans (the percentage for tailors being 85·7, carpenters and cabinet-makers 63, mill and factory hands 61·5) or shopmen (50 per cent.) and general labourers (44·4 per cent.). As to the nationality, one of the author's tables gives the following percentages (representing the frequency of dental caries for every nation examined):—Germans, 65·7; Jews, 58·1; Tartars, 37·2; Russians, 32·6; Poles, 31·1; Tchuvashs, 30·8; Bashkirs, 27·8; Mordvins, 26·3; Moldavians, 16·7; Tcheremisses, 10·0; and Votiaks, 0. The influence of climatic conditions seems to be shown by the fact that dental caries occurs in 34·9 per cent. of natives of the Mid-Russian Governments, and in only 29·7 per cent. of those of the Western, and in 29·8 of the Southern. Of 800 soldiers, 507 were tobacco-smokers and 293 non-smokers. Dental caries was found only in 161 (31·7 per cent.) of the former and in 101 (37·8 per cent.) of the latter. Hence the author concludes that 'Smoking presents a good prophylactic means against dental caries,' and supports this assertion by a further fact that in 85 out of 161 (52·7 per cent.) dental caries made its appearance before their acquiring smoking habits, and in only 76 (47·3 per cent.) after.

4553. *Neshel on Peat-Moss as a Dressing Material.*—In the *Vratch*, No. 24, 1885, p. 389, Dr. Vasily E. Neshel, of the Obukhovsky Hospital, in St. Petersburg, draws attention to dry peat-moss as an excellent and cheap absorbent and dressing material, and fully endorses the statements of Leisrink (who first began to use it), Mielk, Korach, Hagedorn, and Schede. It costs only 50 copeks per *püd* (about one shilling per 16·3 kilogrammes), may be gathered everywhere, and does not require any other previous treatment except picking out any foreign admixture (such as small twigs, leaves, &c.), occasional moistening with a solution of corrosive sublimate, and drying. Peat-moss is employed in the shape of gauze bags or pads of various sizes. The wound is covered first with a piece of iodoform gauze, then with a layer of sublimatised gauze, and over the latter a gauze bag filled with moss, and slightly moistened with a carbolic or sublimatised solution, is laid, the whole being kept in place by a roll-bandage. Wounds remain perfectly dry under a moss bag. The latter is found to be odourless six, eight, and more days, even in presence of very profuse purulent discharge. Any fluid absorbed by moss rapidly evaporates. To prevent overdrying, it is advisable from time to time to moisten the moss-bag lying on the wound with an antiseptic solution. V. Idelson, M.D.

4554. *Schkott on a Case of Scrotal Calculus.*—Dr. J. Schkott reports in the *Wiener Med. Blätter*, No. 24, a case of scrotal calculus in a labourer aged 27, who, after having, when a child, suffered from some injury or disease of that part, observed what was thought to be a third testicle, much harder than that on either side. Seven years before coming under Dr. Schkott's care, he had noticed the occasional presence of blood in the urine, and during the last two years pain in micturition and in coitus. The middle 'testicle' was now of the size of a goose's egg. Three months before he received a blow in the private parts; this was followed by inflammation and the formation of an abscess, which burst, and when seen by Dr. Schkott had not healed. Exploring the fistula with a sound, Dr. Schkott detected three concretions movable one on the other, and, in passing a catheter, an urethral fistula in the membranous portion. At the operation a fibrous sac was discovered, containing seven uric acid calculi. This was extirpated, and the fistula and wound closed with catgut. The fistula reopened once, but a complete cure was ultimately effected.

E. F. Willoughby, M.B.

MEDICINE.

RECENT PAPERS.

4555. Tait.—Jaundice and Pain in Biliary Colic. (*Lancet*, July, p. 41.)

4556. Gairdner.—A Case illustrating Liability to Error in Diagnosis of Gall-Stones. (*Lancet*, May, p. 1025.)

4557. Grabovsky, M. J.—On Unilateral Sweating of the Face. (*Arkhiv. Psikhiatris*, vol. iii., Part I., 1884, pp. 53–58.)

4558. Bernstein, N. O.—On Local Asphyxia and Symmetrical Gangrene. (*Proceedings of the Odessa Medical Society*, 1884, No. 12, pp. 175–181.)

4559. The Cholera Epidemic in Spain. (*El Genio Medico-Quirurgico*, June 30.)

4560. Florioli.—On Pellagra. (*Gaz. Med. Ital. Lombard.*, July 4, 1885.)

Art. 4555. *Tait on Jaundice and Pain in Biliary Colic.*—Mr. Lawson Tait, in the *Lancet*, July 1885, p. 41, discusses the reason why, during the passage of gall-stones, there is frequently no jaundice. In fifteen cases of cholecystotomy there has been no history of jaundice, and Mr. Tait has found that the occurrence of jaundice, either in the skin or in the urine, during and after the passage of gall-stones, is of extreme rarity, and not, as has been believed, common. Mr. Tait seeks for an explanation of his fact in the following anatomical conditions of the cystic and common ducts. The common duct is not so long (3 inches) as most text-books assert, and is much less rigid and more easily dilatable than the cystic duct, which is larger than most of the text-books describe it, viz., one inch. Hence we can understand how a stone, if not of very great size, will cause intolerable agony while passing through the unyielding cystic duct, and without a trace of jaundice ensuing, the gall-bladder alone being its propellent force; but the moment it enters the common duct the extending impulse will be increased by the influence of the whole excreting force of the liver, so that its passage through the common duct is more rapid. The chief symptom then, that of pain, is due to the slow passage of the calculus through the unyielding cystic duct, whilst its rapid passage through the easily distended and much larger common duct gives no time, in the majority of instances, for the production of jaundice, which only takes place after long-continued obstruction of this the common duct.

4556. *Gairdner on a Case illustrating Liability to Error in Diagnosing Gall-Stones.*—In the *Lancet*, May 1885, p. 1025, Dr. Gairdner records the case of a woman, aged 46, who was admitted into the Glasgow Western Infirmary with symptoms and physical signs of mitral regurgitation with some mitral stenosis. The patient stated that for two years she had frequently suffered from pains in the epigastrium, accompanied with vomiting and loss of appetite. For three months the patient was under treatment, during which time the condition of the heart greatly improved, and she returned to her home. About two months later she was readmitted. The heart condition was much the same as when she was first admitted, and the gastric symptoms still persisted. Three days later she complained greatly of pain in the gastric region, and next day a rigor occurred, causing the temperature to rise to 102·4° F. The pulse became very rapid, and there was severe pain in the upper abdomen. She rapidly became unconscious, and died seven hours after the rigor. At the *post mortem* examination, the heart was found to have the mitral valve diseased according to the diagnosis before death; nothing was detected that caused any surprise, until an examination was made of the common bile-duct, when a small stone was caught, and the gall-bladder was found to contain over forty others. Then the author was able to explain the various gastric symptoms from which the patient had suffered; and concluded that numbers of these stones had been passed during the patient's life without being detected, for at no time was the urine found tinged with bile, nor was there ever any sign of jaundice present.

RICHARD NEALE, M.D.

4557. *Grabovsky on a Case of Unilateral Sweating of the Face.*—In the *Arkhiv. Psikhiatrïs, &c.*, vol. iii., Part I., 1884, p. 53, Dr. M. J. Grabovsky, of Kharkov, furnishes minute details of the case of an officer, aged 54, who had been wounded in the right side of the nerve by a splinter of a shell during the battle of Alexinatz (in the Servian campaign of 1871). The wound had been complicated with parotitis and had left a hard linear scar, about 2 centimètres long and ¾ centimètre broad, firmly adherent to the subjacent tissues, and running downwards almost vertically between the mastoid process and auricle. From 1877 the patient has presented the following curious phenomena (which, however, do not trouble him in the least). Each time when he begins to eat the right half of the face reddens; the redness by degrees spreads over the right side of the forehead, right temple, and ear. In about two minutes the reddened regions are covered with profuse perspiration, the sweat running down the cheeks in big drops. The sweating ceases with arrest of the movements of mastication. The temperature of the right cheek, which is otherwise 0·9° C. lower than that of the left, during mastication rapidly rises and keeps at a higher level (about 0·3° C.) than that of the opposite cheek. It returns to the normal level within twelve to sixteen minutes after the stoppage of mastication. The right side of the patient's face is distinctly paretic. Dr. Grabovsky seems to attribute the phenomena to 'an injury of certain ramuli of the facial nerve with subsequent paralysis of the functions of inhibiting the vaso-dilator centres for the right cheek.' A closely similar case of unilateral (right) sweating of the face had been published also by Dr. V. Pokrovsky (*see* Botkin's *Kürs Klinikĭ Vñutren. Boleznĕy*, 1875, Part III.).

4558. *Bernstein on a Case of Raynaud's Disease.*—Dr. N. O. Bernstein, of Odessa, contributes (*Proceedings of the Odessa Medical Society*, No. 12, 1884, p. 175) an instance of a rare neurotic form described by Dr. Maurice Raynaud, under the name of *gangrène symmétrique*. The case was that of a merchant, aged 45, who, after an operation (cauterisation of prolapsed rectum) in 1862, had begun to suffer from true epileptic fits, which had occurred at irregular intervals—varying from two months to two and even ten years. In August of 1883, after a mental shock (caused by the sudden death of his wife), the patient had become subject to peculiar paroxysms not unlike those of intermittent fever; every evening, or about 7 P.M., there appeared severe rigors, extreme prostration, præcordial anxiety, oppression within the chest, extreme feebleness of the pulse (without increase in its frequency), and profuse perspiration. Quinine had proved a failure, but the paroxysms had gradually yielded to tincture of valerian with belladonna extract. For the three last months of 1883 the patient had occasionally complained of feeling cold all over the body, and of night-sweats, to which symptoms, in January 1884, pain and tenderness of both of the ears had been added. On Jan. 14, the author's attention was drawn to extreme paleness of the auricles, which four days later turned dark blue ('so as to lead the patient's friends and himself to the idea that he had somehow smeared his ears with ink') and were found cold and very tender to touch. In a few days, the skin covering the helices became black and transformed into hard, dry sloughs, sharply limited from the remaining part of the ears, which commenced to grow paler. Gangrene of the ears was soon followed by similar but slighter symmetrical phenomena on the fingers and toes, which from time to time suddenly became cold, stiff, and deadly pale or livid, to resume their normal appearance in periods varying from a few minutes to an hour. Simultaneously, periodical nightly attacks of general coldness with prostration and perspiration reappeared. Under the influence of the administration of large doses of bromide of potassium, arsenic, and quinine, and the use of electricity (galvanisation with the anode to the cervical sympathetic nerve and the cathode to the belly), a considerable improvement followed; acute attacks of local asphyxia in the extremities and of general coldness ceased to occur. The case is still under observation. After discussing the nature of Raynaud's disease and duly scrutinising the details of his case, Dr. Bernstein arrives at the conclusion that his patient 'suffers from morbid excitability of the vaso-motor centres, which at one time manifests itself in local syncope and asphyxia of peripheral parts of the body, another time produces local anæmia in those parts of the brain which determine the occurrence of epileptic fits; and at other times again give rise to intermittent-like paroxysms.' V. Idelson, M.D.

4559. *The Cholera Epidemic in Spain.*—The commission appointed by the Spanish Government to study the epidemic now prevailing in Valencia, and especially Ferran's inoculations, have handed in their report. Their conclusions are these. 1. The disease is Asiatic cholera. 2. The comma-bacillus (without spores) is present in the attenuated cultivations of Dr. Ferran. 3. The inoculation is harmless, and should be permitted under the supervision of the State. Statistics to be collected until it is determined whether the system is or is not truly prophylactic. 4. Dr. Ferran is an approved disciple of Pasteur, and as such is deserving of official protection in the prosecution of his experiments. Dr. Martin presents a special report, in which he says that the difficulties the commission met with have prevented the detailed study required by the importance of the question, and that no decision can be come to of the efficacy of Ferran's inoculation. He regards cholera as solely imported by man, but yet not contagious. Dr. Campá, dean of the Medical Faculty of Valencia (*El Siglo Médico*, June 14), asserts that in no case have grave accidents followed Ferran's inoculations, not even when the 'experimental cholera' following inoculation was so severe as to resemble confirmed algide cholera; on the contrary, however grave and alarming the symptoms, they disappeared spontaneously after some hours (4 to 12 hours). The local symptoms, although always very troublesome, have never been alarming and lasting, either in men, women, or children.

4560. *Florioli on Pellagra.*—The author regards fermented maize as the chief cause of pellagra, other subsidiary causes being exposure to the sun, insufficient food, excessive work, and unhealthy habitations. The first manifestations of the disease are always noticed in the hot season of the year; the disease is peculiar to country peasants, though mild cases are not unfrequently seen in towns. It is distinctly hereditary and contagious. Florioli holds that pellagra is due to a vegetable parasite, the *Sporisorium Maidis*, perhaps a parasite of the sporisorium itself, which penetrates and develops in the human organism, even by the respiratory and cutaneous surfaces. The parasite has its principal seat in the blood, where it lives and multiplies and hybernates, and through which it infests all the tissues of the human economy. In the treatment of the disease he uses chlorine and phosphorus, and their preparations. G. D'Arcy Adams, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

4561. Hudson.—Belladonna and Galvanism in Intestinal Obstruction. (*Med. Times and Gazette.*)

4562. Squibb.—Oleate of Cucain. (*Boston Med. and Surg. Jour.*, March 12.)

4563. Cruise.—Royat-les-Bains in Eczema. (*Lancet*, June, p. 1160.)

4564. Ellis.—Osmic Acid in Neuralgia. (*Lancet*, June, p. 1189.)

4565. Nairne.—Belladonna in Defective Lactation. (*Brit. Med. Jour.*, June, p. 1290.)

4566. Paget.—Cucain in Hay-Fever. (*Brit. Med. Jour.*, June, p. 1291.)

4567. Buck.—The Treatment of Erythema Nodosum. (*Brit. Med. Jour.*, June, p. 1291.)

4568. Roberts.—Oleum Deelinæ in Skin Diseases. (*Practitioner*, June, p. 401.)

4569. Barford.—Cucain in Operations for Fistulous Canals. (*Lancet*, June, p. 1033.)

4570. Dovodtchikoff.—On Naphthalin in the Treatment of Ulcers. (*Vratch*, No. 25, 1885, p. 406.)

4571. Trivüs, S. L.—On Salicylate of Soda in Neuralgia of the Orbital Branch of the Trigeminus. (*Vratch*, No. 24, 1885, p. 392.)

4572 Kürzakoff, A. P.—On Hydrochlorate of Pilocarpine in Dentistry. (*Zübovratchebnyi Vestnik*, June 1885, pp. 161-165.)

4573. Rosenblum.—On Salicylate of Soda in Typhus and Enteric Fever. (*Proceedings of the Kaluga Medical Society*, 1884, pp. 27-29.)

4574. Rosenblum.—On Trichlorphenol and Carbolic Acid in Small-pox. (*Proceedings of the Kaluga Medical Society*, 1884, pp. 33-35.)

4575. Burjinsky, P. V.—A Contribution to the Study of the Action of Nitroglycerine in Nephritis. (*Vratch*, No. 21, 1885, pp. 335, 336.)

4576. Dreier, V. J.—Papayotin in Diphtheria. (*Vratch*, No. 15, 1885, pp. 229-331.)

4577. Semtchenko, D. G.—On Phosphorus in Rachitis. (*Vratch*, No. 11, 1885, pp. 161, 62.)

4578. Hopeïn, the Narcotic Principle of Hops. (*Der Fortschritt*, June 20, 1885.)

4579. Panas.—A New Mydriatic contained in Cucain. (*Deutsche Med. Zeitung* and *Der Fortschritt*, No. 13.)

4580. Hydrate of Chloral for Blisters. (*Der Fortschritt*, July 5, 1885.)

4581. Landerer and Others.—A Case of a Prophylactic against Hydrophobia. (*Der Fortschritt*, April 26, 1885.)

4582. Renzi.—Inhalations in Phthisis. (*Revista Clinica e Terapeutica*; and *Der Fortschritt*, July 20.)

4583. Annessens.—On Aseptol, or Sulpho-Carbol. (*Bull. de l'Acad. de Médecine de Belgique*; and *Der Fortschritt*, p. 20.)

4584. Tedeschi.—The Treatment of Rickets. (*Riv. Venet. di Scienze Mediche*, May 1885.)

4585. Pierd'houy.—The Anæsthetic Salts of Aconitia. (*Gazz. Med. Ital. Lombard.*, June 27, 1885.)

4586. Giacich.—Statice Cancellata as a Diuretic. (*Riv. Venet. di Scienze Mediche*, May 1885.)

4587. Livierato.—The Biological and Therapeutical Action of Cucain. (*Gazzetta degli Ospitali*, June 17, 1885; *La Salute*, No. 3, 1885.)

4588. Sée.—The Treatment of Asthma by Pyridine. (*Bull. Génér. de Thérap.*, June 30.)

Art. 4561. *Hudson on Belladonna and Galvanism in Intestinal Obstruction.*—Dr. T. J. Hudson gives, in the *Med. Times and Gazette*, the results of his experience of the two agents mentioned above in numerous cases of intestinal obstruction that have fallen under his notice in the Potteries, due to the lead used in glazing vessels. Belladonna acts by paralysing the inhibitory action of the abdominal sympathetic, relaxing the unstriped muscular fibres, stopping the spasms and peristaltic colic of parts above the obstruction, and enabling the sympathetic accelerating fibres to come into full play. It is best used by applying the extract to the abdomen with hot poultices and giving suppositories of 1 to 2 grammes of the fresh extract every hour, or injections of atropine $\frac{1}{120}$ grain every two hours until the pupil is dilated. The constant galvanic current, excited by ten to thirty cells of Leclanché's battery, one reophore to either flank, or one to the abdomen and the other to the anus, should be applied three or more times a day for ten minutes, if well borne. [For information upon all the varied modes of using belladonna and galvanism in intestinal obstruction, sects. 873 : 5, 870 : 6, and 876 : 1 of the *Medical Digest* may be consulted with advantage.—*Rep.*]

4562. *Squibb on Oleate of Cucain.*—Dr. E. R. Squibb, in a recent communication to the *Boston Med. and Surg. Jour.*, March 12, 1885, reports the results of the employment of aqueous and oleaginous solution of cucain for local anæsthesia when applied to the epidermis. He found a very concentrated aqueous solution, long applied, have some effect, but the oleate was useless, besides being very costly.

4563. *Cruise on Royat-les-Bains in Eczema.*—Dr. F. R. Cruise, from a personal experience, recommends these waters in cases of eczema; and in the *Lancet*, June 1885, p. 1160, enters fully into the route best to take, and gives a full description of the baths and their surroundings, together with an account of the daily routine pursued by visitors. An analysis of the waters show that they belong to the class of alkaline-chlorinated waters, with the addition of salts of lithium, iron, and arsenic. They are stimulating to the circulation, and at the same time diuretic, laxative, and tonic. They will be found useful in all forms of gout and rheumatism, in anæmia and lymphatic affections, as well as in affections of the throat, lungs, and uterus. The climate, like all mountain air, is revivifying in a marked degree, and is, moreover, temperate and dry; the whole district being celebrated for the abundance of its fruits and flowers.

4564. *Ellis on Osmic Acid in Neuralgia.*—Mr. W. A. Ellis, in the *Lancet*, June 1885, p. 1189, draws attention to one of the 'untoward effects' of injecting osmic acid in neuralgia. A patient had pain in the little finger, into which four minims of a 1 per cent. solution was injected, with the immediate effect of relieving the pain; but next day the puncture was painful and swollen, and continued swollen for several weeks, although the neuralgic pain never returned.

4565. *Nairne on Belladonna in Defective Lactation.*—Mr. J. Stuart Nairne, in the *Brit. Med. Jour.*, June 1885, p. 1290, speaks highly of the value of belladonna internally in threatened inflammation of the breast, having found the external use either useless or positively injurious. Ten drops of the tincture were given every hour until the throat became dry, then only thrice a day.

4566. *Paget and Others on Cucain in Hay Fever.*—In the *Brit. Med. Jour.*, June 1885, p. 1291, Dr. W. S. Paget confirms by actual experience the good opinion formed by several observers of cucain in hay fever, a drop or two of a 4 per cent. solution being dropped into the nostrils and eyes with marked beneficial results. At p. 1322 another observer speaks confidently of the curative powers of a nasal douche containing ten grains of borax and of alum to the pint of warm water.

4567. *Buck on the Treatment of Erythema Nodosum.*—Dr. W. E. Buck, thinking this disease was clearly allied to erysipelas, decided to treat it antiseptically with sulphurous acid (vide *Brit. Med. Jour.*, June 1885, p. 1291). Lint soaked in equal parts of boiling water and sulphurous acid was placed over the patches, and changed when it became cool.

4568. *Roberts on Oleum Deelinæ in Skin Diseases.*—Dr. John Roberts describes, in the *Practitioner*, June 1885, p. 401, the marvellous powers that an oil prepared by the Dee Oil Company possesses over skin diseases. Forty-two cases, among which were cases of eczema, erythema, sycosis, pruritus ani, hæmorrhoids, and of ichthyosis, are reported as cured in very short periods by the use of the oil. The drug is clean, inodorous, and does not become rancid; and for all that it is an oil it does not grease the clothes, being readily absorbed. Before applying the oil, the parts are to be carefully washed with warm bran or oatmeal water and gently dried.

4569. *Barford on Cucain in Operations for Fistulous Canals.*—In the *Lancet*, June 1885, p. 1033, Mr. Barford relates an interesting case of a clergyman who came to London to be operated upon for hæmorrhoids. The operation was performed without difficulty, and the inner surface of the rectum healed rapidly. A few days after the operation, however, the temperature rose to 104° F., and in due time there was an accumulation of pus in the perineum. After some weeks the patient returned to his home in the country with two sinuses in his perineum, and later on two more appeared. The patient being a bad subject for anæsthetics, Mr. Barford decided to try cucain. Some small plugs of cotton-wool were saturated with a 20 per cent. solution and inserted into the sinuses, one plug in each, and allowed to remain for a quarter of an hour. Each sinus was then laid freely open, and no pain was felt, except when the skin was being cut through in laying open the deepest part. Only one drachm of the 20 per cent. solution was used for the operation. The author adds that in operating with cucain there is little hæmorrhage, and it is likely to become a valuable remedy for restraining bleeding.

RICHARD NEALE, M.D.

4570. *Dovodtchikoff on Naphthalin in the Treatment of Ulcers*—In the *Vratch*, No. 25, 1885, p. 406, Dr. Dovodtchikoff highly eulogises naphthalin as a dressing material for ulcers. Its main advantages are these. 1. It is cheap. 2. Its application is simple and easily practicable, even for patients from the poor (working) classes. 3. It induces rapid growth of healthy granulations, and rapid cicatrisation. 4. It rapidly removes the bad odour and unhealthy appearance of granulations. 5. While diminishing irritability and painfulness of the ulcer, it allows the patient to continue his occupation without any harm as regards the healing process; a circumstance which is of enormous importance for patients of the working classes. The author powders the ulcer with naphthalin twice daily, removing the powder, on each occasion, with a stream of water from a tea-pot; the powdered ulcer is covered with a piece of thin oil-cloth, and then a roll-bandage is firmly applied. It is absolutely necessary to use a pure, dry, well-pulverised naphthalin, free from any foreign odour. [Thus, Dr. Dovodtchikoff's experience on naphthalin agrees, in the main, with that of Dr. Jatzuta (*see* the LONDON MEDICAL RECORD, Nov. 1884, p. 491), Lindenbaum, and Diakonoff (*ib.*, March, p. 14).—*Rep.*]

4571. *Triviüs on Salicylate of Soda in Neuralgia of the Orbital Branch of the Trigeminus.*—Having successfully used salicylate of soda in megrim (as recommended by Drs. Devlezersky and, later, Finkelstein; *see* the LONDON MEDICAL RECORD, December 1883, p. 525, and November 1884, p. 499), Dr. S. L. Triviüs, of St. Petersburg, decided to try the same drug in other neuralgiæ. In the majority of cases of rheumatic origin (or, properly speaking, of unknown causation) the results were satisfactory; but in four cases of neuralgia of the orbital branch of the fifth nerve they were positively brilliant. The drug was administered either ten grains every half an hour, or from ten to twenty grains every hour. After two or three doses pain disappeared and did not return. Like Professor Zimmermann and Edlefsen (and independently of them), Dr. Trivüs feels inclined to admit some etiological connection between articular rheumatism and certain forms of neuralgia.

4572. *Kürzakoff on Subcutaneous Injection of Pilocarpine in Toothache.*—The perusal of Dr. P. M. Popoff's article (*see* the LONDON MEDICAL RECORD, Jan. 1884, p. 20) led Mr. A. P. Kürzakoff, of Moscow, to try (*Zübovratchebnyi Vestnik*, June 1885, p. 161) the treatment of toothache by hypodermic injection of hydrochlorate of pilocarpine in three severe cases of his own. A solution of two grains of the salt in half an ounce of distilled water was used, the injection being made into the temporal region on the side of the odontalgia. In two of the cases one-eighth, and in a third case one quarter, of a grain of the salt was injected. In all the cases pain disappeared permanently in about an hour after the injection; about the same time salivation and perspiration (caused by the drug) also ceased. In one of the cases, in that of a man aged 46, with rheumatic periodontitis associated with agonising earache, the injections (of a quarter of a grain) produced profuse vomiting, with cyanosis, general weakness, and drowsiness, all of which symptoms disappeared in about an hour and a half after taking twenty drops of tincture of valerian. The author thinks that this simple plan of treatment fully deserves a further and more extensive trial.

4573. *Rosenblum on Salicylate of Soda in Typhus and Enteric Fever.*—Dr. Rosenblum, of Likhvin, states (*Proceedings of the Kaluga Medical Society*, 1884, p. 29) that he obtained very good results from the treatment of typhus fever by the administration of salicylate of soda, in scruple doses, repeated two or three times daily (for adults). He never observed any digestive disturbances from the drug. In combination with tannic acid, salicylate of soda proved also of use in enteric fever.

4574. *Rosenblum on Trichlorphenol and Carbolic Acid in Small-pox.*—Dr. Rosenblum, of Likhvin, states (*Proceedings of the Kaluga Medical Society*, 1884. p. 33) that he has found painting with trichlorphenol oil and carbolised oil of great value in small-pox. While 25 of 64 patients treated with olive-oil recovered with pitted integuments, only 6 of 210 patients painted with carbolised oil, and none of 34 patients painted with trichlorphenol oil, were pitted. In 29 (76·3 per cent.) of 38 houses (with 64 patients) in which olive-oil had been employed, further cases of small-pox occurred. Meanwhile, only in 4 (5·7 per cent.) of 70 houses (with 210 patients) in which carbolic oil had been used, fresh instances of the disease were observed; and in 19 houses (with 34 patients) where trichlorphenol had been applied, there was no further spread of small-pox. Dr. Rosenblum mentions, also, that he obtained good results from the internal administration of salicylate of soda and a half per cent. solution of trichlorphenol in cases of scarlatina-fever in children. [Generally, the author has a high opinion of the antiseptic properties of trichlorphenol; *see* his paper in the LONDON MEDICAL RECORD, July 1884, p. 296.—*Rep.*]

4575. *Burjinsky on the Action of Nitroglycerine in Nephritis.*—In a preliminary note in the *Vratch*, No. 21, 1885, p. 335, Dr. P. V. Burjinsky, of St. Petersburg, reports the results of his study of the action of nitroglycerine in three cases of chronic interstitial nephritis, which came under his observation in Professor V. A. Manassein's clinic. They are these. 1. Given in small doses, varying from 5 milligrammes to 1 centigramme (0·075 to 0·15 grain) a day, nitroglycerine diminishes the daily as well as the per cent. amount of albumen in urine. 2. The daily quantity of urine markedly increases under the administration of the drug, the increase continuing for a certain period after discontinuing the administration. 3. A gradual increase in the doses of nitroglycerine produces a still more marked diminution of albumen. 4. The drug does not produce any influence on the body's weight or dropsical state. 5. With exception of slight transient headache, the use of nitroglycerine does not give rise to any awkward accessory symptoms. Dr. Burjinsky continues his clinical observations, which he undertook after the perusal of an article on the subject by Professor Rossbach in the *Berlin. Klin. Wochenschr.*, No. 3, 1885.

4576. *Dreier on Papayotin in Diphtheria.*—Papayotin, a trypsin-like body obtained from the juice of Carica papaya, was first recommended as a solvent for diphtheritic pseudo-membranes by Professor Rossbach (see the *Berlin. Klin. Wochensch.*, 1881, No. 10). The recommendation was taken up by Croner (see the LONDON MEDICAL RECORD, July 1883, p. 284), Leyden, Flotow, Fraentzel, Finkler, (*Verhandl. der Dritten Congr. für innere Med.*, 1884), Schaeffer (*Berlin. Klin. Wochensch.*, 1883, No. 52), Koths and Ash (*Zeitschr. für Klin. Med.*, vol. v.). The best results were obtained by Schaeffer, who had used papayotin in forty-seven cases, the mortality having been less than 4 per cent. Koths and Ash employed the drug in fifty-three cases; and though the mortality in their patients was 49 per cent., they arrived at the conclusion that papayotin at all events diminished the percentage of deaths. At the same time they stated that the drug considerably accelerated the disappearance of membranes. Other observers used the remedy with variable success. To elucidate the matter, Dr. V. J. Dreier, of the St. Vladimir's Hospital for Children, in Moscow, undertook a series of observations of his own (*Vratch*, 1885, p. 15). He used a 5 per cent. solution of papayotin (usually of Merck's preparation) in water, or in a 2 per cent. solution of bicarbonate of soda, with which fluid he freely painted the affected parts every fifteen minutes, except during night-time, when a free interval of three or four hours was made. The treatment was pursued in thirty-one cases, its average duration being about two or three days; the shortest thirty hours, the longest five days. The mortality was 62 per cent. The author came to the following conclusions. 1. Papayotin produces a slight solvent action on diphtheritic membranes in the stage of their regressive evolution. 2. Soft, freshly-originating membranes do not yield to the action of the drug. 3. Papayotin has no influence on the mortality and general symptoms in diphtheria.

4577. *Semtchenko on Phosphorus in Rickets.*—While Professor Kassowitz (*see* the LONDON MEDICAL RECORD, June 1884, p. 252), his pupil Hochsinger, Professors Soltman, Hagenbach (*Corresp. Blatt. für Schweit. Aerzte*, July 1884), and Sznabl (the

London Medical Record, June 1885, p. 251) obtained very good results in the treatment of rickets by phosphorus, Professor Henoch and Schwechten were compelled by their own experience to deny any utility to the drug. To bring his mite in solving the question, Dr. Dmitry G. Semtchenko, of Kazan, tried (*Vratch*, No. 11, 1885) the phosphorus treatment in fifteen cases of rickets, the age of the patients varying from 3½ to 22 months. The drug was given in daily doses of one to one and a half milligramme, in from two to four teaspoonfuls of an emulsion with almond-oil, gum, sugar, and distilled water. No other drug was simultaneously used. The duration of the trial varied from a few weeks to two months and more. The results were entirely negative in all respects, and in all the cases the author fell back to his usual method of treatment. The latter consists of—1, administering warm salt baths (with ½ to 1 pound of common salt to 3 pailfuls of water) every other day; 2, daily washing the head with lukewarm water, and the whole body with *vodka* (aqua vitæ) and water; 3, the internal use of one to two grains of tannate of quinine with one-eighth of a grain of extract of ergot, in powders, from two to four times daily; 4, feeding with common or bottled beef-tea, boiled milk with one or two teaspoonfuls of lime-water, and one-quarter or one-half a teaspoonful of fine cognac to a tumbler; to suckling infants, a mixture of equal parts of limewater and glycerine, two or four teaspoonfuls a day, is given; 5, to children with large bellies, enemata, made of one or two tumblerfuls with alternate additions of salicylate of soda (from 15 to 40 grains), borax (from 10 to 30 grains), and carbolic acid (two or three tablespoonfuls of a 1 per cent. solution) are administered. This plan of treatment of rickets proves invariably successful in the author's hands, a marked improvement being manifest in one or two months.

V. Idelson, M.D.

4578. *Hopeïn, the Narcotic Principle of Hops.*—An article on this subject appears in *Der Fortschritt*, June 20, 1885. It has long been supposed that hops contain a narcotic principle, the isolation of which however failed, until W. Williamson and Springmuehl first succeeded in obtaining from American hops a new alkaloid, hopeïn, of eminently narcotic properties, barely inferior in power to morphia, without, however, the objectionable subsequent effects of the latter. The experiments connected with concentration in vacuum of strongly hopped English beer and the brewing of condensed beer, lead to the conviction that certain qualities of hops contain small quantities of a narcotic alkaloid, in its properties closely related to morphia. Just as only certain kinds of poppies grown in particular climates yield a satisfactory quantity of morphia, so also the larger or lesser proportion of the narcotic principle of the hops vary according to the place and the manner of cultivation of this plant; whereas German hops possess only traces of hopeïn, the richness in this alkaloid of the wild American hops alone rendered possible the production of a sufficient quantity for the first physiological experiments. The concentration of English beer, strongly charged with American hops, proved that this kind of hops contains a narcotic principle, the condensed beer possessing an undeniable, although mild, narcotic property. By boiling large quantities of American hops with wort, brewed after the English system, and condensing the extract in the vacuum, concentrated solutions of the new alkaloid were obtained, but its isolation still failed. This at last was realised by boiling under high pressure large quantities of wild American hops with a pure slightly acidified solution of grape-sugar. This solution was filtered through asbestos, and condensed in a vacuum at a low temperature; and from it the alkaloid, which is but slightly soluble in water, was extracted. Very large quantities of hops were required for the preparation of the first 100 grammes (3½ ounces) of pure hopeïn, which are now serving for the therapeutic experiments still continuing. Detailed reports are promised by the discoverers.

4579. *Panas on a Mydriatic contained in Cucain.*—*Der Fortschritt*, July 5, reproduces from the *Deutsche Med. Zeitung* the following communication. M. Panas reported, not long ago, on a slight and transient mydriasis caused by cucain. Quite lately, however, he observed a more energetic dilatation of the pupil, contradictory to his previous experience. On investigation of this fact, he found the following explanation. Owing to the present scarcity and high price, the cuca leaves are submitted to a second extraction. The cucain thus obtained by the second distillation contains a substance which, dilating the pupil, represents a new mydriatic. It has been analysed by Calmels, who considers it a derivative of hygrine, probably a hygrinic ether. The action of this new mydriatic differs from that of atropine by being of shorter duration (seldom lasting longer than twenty-four hours), and having no anæsthetic effect.

4580. *Hydrate of Chloral for Blisters.*—Hydrate of chloral has lately successfully been employed instead of cantharides for blisters. For this purpose, powdered chloral is sprinkled on previously slightly warmed adhesive plaster. Vesicles are raised by it in about ten minutes. The advantages of this blister over other kinds are, rapid and perfectly painless action, and absence of any troublesome effect usually caused by cantharides.

4581. *Landerer and others on a Prophylactic against Hydrophobia.*—According to an old tradition in Greece and in the Levant (*Der Fortschritt*, April 26, 1885), the monks of a convent on the island of Salamis are reputed for possessing an ancient prophylactic against hydrophobia. In consequence, every year a great number of people who have been bitten by dogs suspected of hydrophobia, or by snakes, proceed hither from all parts of the East, in order to procure from the monks this famous 'Pharmakon antilyssikon.' Professor Landerer, some years ago, likewise visited this convent, and with great difficulty succeeded in obtaining a small quantity of the nostrum. He found, on careful examination, that it consisted of a mixture of the bark of the root of Cynanchum erectum and of powdered Mylabris punctata. Both were already known as remedies in the times of Hippocrates and Dioscorides. Pliny mentions the Cynanchum by the name of Cynancha. The Greek names of this plant Kynanchonon (κυών, dog; χώειν, to bury), Kynomoron (μόρος, death, fate), and Anchein tous kynas (ἄγχειν, to strangle), mean dog's bane, and correspond to the popular German names, 'Hundswürger' and 'Hundstod'—*i.e.* 'dog's choker,' or 'dog's death.' The Mylabris is the Kantharis, the blistering insect of Hippocrates, which he and other ancient physicians employed in the preparation of the epispastikon. This insect is found on thistles in the months of July and August, when it is collected by the peasantry, and, like the

Spanish fly, is threaded and dried. When a blister is required, the coarsely powdered insect is kneaded with leaven. Its effect is more rapid and more certain than that of the cantharis vesicatoria. Professor Landerer introduced this powder under the name of Pulvis antilyssicus in his second edition of the *Greek Pharmacopœia* of 1865. [The Cynanchum, 'Swallow-wort,' which is a translation of its old appellation 'Hirundinaria,' under which this plant is found in the works of Otho Brunfeldius and other authors of the 15th and 16th centuries, belongs to the natural order *Asclepiadeæ*, family *Contortæ*. Its scientific synonyms are Cynanchum (R. Bz.); Vincetoxicum (Monck); 'Master poison' or 'tame poison,' and Asclepias (L.), so named from Asklepios, the god of medicine, who is said to have discovered its virtues, and to whom one species was consecrated, which, therefore, was made the emblem of medicine. There are many species of this plant in Europe, Asia, Africa, and in America. The officinal Swallowwort, Asclepias Vincetoxicum, is a native of most parts of Europe, but it is not found wild in Great Britain, as already remarked by Linnæus. The Mylabris F. belongs to the family of the Meloïdeæ, of which the Meloë proscarabæus L., the oil-beetle, is common in Europe on dry pastures in spring. Preserved in honey, it is likewise a popular remedy against hydrophobia.—*Rep.*]

4582. *Renzi on Inhalations in Phthisis.*—Dr. Renzi, in the *Revista Clinica e Terapeutica*, summing up the results of his numerous experiments on the effect of inhalations in phthisis, comes to the following conclusions (reported in *Der Fortschritt*, July 20, No. 14). 1. Inhalations of iodine and iodoform with spirits of turpentine (1 to 25, a few drops of these placed on a respirator) stimulate the general nutrition, increase the inspiratory and expiratory pressure, and relieve the condition of the lungs. Fever, diarrhœa, and night-sweats, however, will not be modified. Iodoform, with spirits of turpentine, will especially ease both cough and expectoration. 2. Inhalations of hydrosulphuric and sulphurous acid have a similar effect; they raise the general strength, improve nutrition, and increase micturition. Inhalations of hydrosulphuric acid have a special effect on respiration, diminishing in number the respiratory movements, which become easy, quiet, and deeper, and on the cough, which becomes less troublesome and violent, and may even entirely disappear. Fever, diarrhœa, and perspiration, however, will not be influenced. 3. Until further experience, Dr. Renzi considers the inhalations with spirits of turpentine and of hydrosulphuric acid the most beneficial.

4583. *Annessens on Aseptol, or Sulpho-Carbol (Acide Orthoxyphényl sulphureux).*—*Der Fortschritt* (July 20, No. 14) communicates, from a paper by M. Annessens, of Antwerp, published in the *Bulletin de l'Académie Royale de Médecine de Belgique*, the conclusions drawn by the author, supported by extensive experience, on the virtues of aseptol. 1. Aseptol, differing from salicylic and carbolic acid, in every proportion readily dissolves in water, alcohol, and glycerine. 2. It is more acid, but at the same time less caustic, than carbolic acid. 3. It directly combines with bases, which salicylic and carbolic acid will never do. 4. It is perfectly harmless in use, consequently not liable to cause accidents like salicylic, carbolic, and boracic acid. 5. Its antifermenting, antiputrid, and disinfectant properties are more energetic than those of salicylic and carbolic acid. 6. Aseptol will advantageously replace carbolic acid as a prophylactic and a disinfectant in times of epidemics, and as a curative remedy wherever carbolic acid is employed for hygienic purposes, and in medical, surgical, and obstetrical practice. 7. Aseptol, for these properties, highly recommends itself to the use of public and private promoters of hygiene and salubrity.

FERD. ADALB. JUNKER, M.D.

4584. *Tedeschi on the Treatment of Rickets.*—Tedeschi holds that the osseous affection in rickets is due to alterations of certain centres of the nervous system, but that the precise seat and nature of these alterations are not yet determined. This hypothesis is based on the insufficiency of the received theories to explain the pathogenesis of rickets, and is supported by the many nervous symptoms which accompany the disease; by the great similarity which the alterations of the rachitic bones have with those provoked artificially by injuring certain nerves, and with those again found in the bones of persons suffering from certain nervous affections; by the perfect and constant symmetry of the alterations produced by rickets; and, finally, by the surprising results obtained with galvanisation of the spinal cord in 139 cases. Kassowitz teaches that the lesion of rickets is due to inflammation of the bone, the starting-point of which is dilatation of its vessels and then undue development. Phosphorus, given in small doses, has the property of contracting these vessels, and is, therefore, the specific for rickets. Tedeschi has tried the treatment by phosphorus in 65 cases. He finds that in many cases it is not well tolerated, and its use has to be suspended. In nearly all cases it gave rise to troublesome diarrhœa. He is inclined to attribute much of the benefit obtained by Kassowitz from its administration to his giving it in cod-liver oil. Tedeschi has obtained better results with arsenic. Galvanism is the most successful treatment. Tedeschi has now published 188 cases treated thus. The theory of Kassowitz does not lessen the value of Tedeschi's hypothesis, since there is no proof that the action of phosphorus is on the osseous system directly without the aid of the innervation.

4585. *Pierd'houy on the Anæsthetic Salts of Aconitia.*—Dr. Pierd'houy finds that one or two drops of a 1 per cent. solution of hydrochlorate or valerianate of aconitia dropped into the eye produces, after two or three minutes, anæsthesia of the conjunctiva, as much as does cucain. It, however, causes slight injection of the conjunctiva, followed, after a short interval, by a feeling of burning and tingling in the eye, and extending to the skin of the cheek and lip. Sometimes there is slight lacrymation. The anæsthesia remains perfect for 20 or 30 minutes, and disappears after an hour; the disagreeable feelings cease within two hours at the longest. The pupil is a little contracted in the first quarter of an hour, and then slightly dilated. A 1 per cent. collyrium of hydrochlorate of aconitia gave great relief in an obstinate neuralgia of the first branch of the fifth nerve, which did not yield to local injections of morphia, atropine, and quinine. The effect, however, was always only temporary, and the accesses of ciliary pains only finally ceased after stretching the external branch of the nasal nerve at the internal angle of the eye between the tendon of the orbicularis and the trochlea of the great oblique.

4586. *Giacich on the Use of Statice Cancellata as a Diuretic.*—Dr. Giacich recommends the Statice cancellata as a valuable diuretic. It slows the heart's action, lowers the temperature, and increases the flow of urine. Dr. Catti, of Fiume, finds it especially useful in exudations into the larger cavities. It is slow in action, and its use may be prolonged safely. The plant grows on the shores of the Adriatic. It should be collected in June. The dose is from 25 to 40 grammes in decoction.

G. D'Arcy Adams, M.D.

4587. *Livierato on Cucain.*—The author, from his experiments in Professor Maragliano's laboratory at Genoa, draws the following conclusions. 1. Cucain injected under the skin, even in small doses (·01 gramme —*i.e.*, about one-seventh of a grain), has an action on the peripheral nerves of the part. 2. Small doses, of ·02 gramme, may in certain cases lessen local sensibility to touch and to pain. 3. Larger doses, 0·1 gramme (1½ grain), may cause complete anæsthesia of all kinds of sensibility in a comparatively extended area. 4. Cucain injected under the skin has an action on the circulation in addition to its local action. 5. This action is observed after doses of one-seventh grain, and is more marked after higher doses. 6. The frequency of the pulse generally increases by a few pulsations up to eight or fourteen beats a minute. 7. The intra-arterial pressure is lowered by a few millimètres to twenty, according to the person and independently of the dose. 8. The ascending curve of the pulse is lowered and the descending becomes shorter. 9. Respiration does not undergo any modification worthy of note under the action of doses of one-seventh of a grain to 2 grains. 10. The action in healthy persons commences from thirty to thirty-five minutes after the injection, according to the dose. The action may last from twenty minutes to upwards of an hour. 11. Cucain is capable of completely annulling neuralgic pain. 12. This action on pain takes place not merely at the seat of injection, but even at a distance. 13. The calming action begins a few minutes after the injection, and lasts from one to six hours, according to the dose. 14. Cucain in doses of one-seventh of a grain to 2 grains does not produce any general phenomenon. 15. Nor does it in like doses produce mydriasis.

William R. Huggard, M.D.

4588. *Sée on the Treatment of Asthma by Pyridine.*—This colourless and strong-scented fluid is obtained from many organic substances by dry distillation. It has been detected in nicotine and other alkaloids and in the fumes of tobacco. It is probably the active principle of the various cigarettes and papers which have been recommended against asthma. Recent experiments by MM. Sée and Bochefontaine have shown (*Bull. Génér. de Thérap.*, June 30) that it produces in frogs and guinea-pigs a diminution of the irritability of the respiratory centre. Pyridine has been tried in asthma with marked success; 4 or 5 grammes of this fluid are poured on a plate and placed in a small room in which the patient remains for from twenty to thirty minutes, three times a day. The respiration becomes easy, and after a few sittings the disease disappears more or less completely. The inhalations have no bad effects on the heart or general health. In spite of these good results, M. Sée still considers iodine the best curative remedy in asthma; pyridine is chiefly useful against the attacks of dyspnœa.

J. S. Keser, M.D.

DERMATOLOGY.

RECENT PAPERS.

4589. Touton.—On Xanthoma. (*Viertelj. für Derm. und Syph.*, 1885, Heft 1)

4590. Hardaway.—A Case of Multiple Xanthoma. (*St. Louis Courier of Med.*, October 1884.)

4591. Auspitz.—Granuloma Fungoides (Mykosis Fungoides, Alibert). (*Ibid.*)

4592. Robinson.—Trophic Lesions of the Skin following Cerebral Hæmorrhage. (*Jour. of Cutaneous and Venereal Diseases*, vol. iii., No. 2)

4593. Leloir.—Eczema of Flax-workers. (*Annales de Derm. et de Syph.*, vol. vi., No. 3.)

4594. Guelliot.—Epidemic Purpura. (*Union Méd. du Nord-Est*; abstract in *Annales de Derm. et de Syph.*, vol. vi., No. 3.)

4595. Cornil and Alvarez.—The Micro-organisms of Rhino-scleroma. (*Annales de Derm. et de Syph.*, vol. vii., No. 4.)

4596. Alexander.—The Treatment of Ringworm of the Scalp by Chrysarobin. (*Jour. of Cutaneous and Venereal Diseases*, vol. iii., No. 2.)

4597. Kundrat and Kaposi.—A Case of Generalised Favus. (*Wien. Med. Presse*, Oct. 26, 1884.)

4598. Feulard.—A Case of Urticaria Pigmentosa. (*Annales de Derm. et de Syph.*, vol. vi., No. 3.)

4599. Doutrelepont.—Tubercular Meningitis consecutive on Lupus: Tubercle-Bacilli in the Blood. (*Deutsche Med. Wochensch.*, 1885, No. 7.)

4600. Lesser. — Treatment of Lupus by Arsenic. *Centralbl. für die Med. Wiss.*, 1885, No. 7.)

4601. Rossbach.—Remarkable Case of Senile Changes in the Skin in a Young Man Eighteen Years Old. (*Deutsches Archiv für Klin. Med.*, February 1885.)

4602. Lassar.—Paget's Disease of the Nipple. (*Report of the Med. Society of Berlin*, meeting of Feb. 25, 1885.)

4603. Wegl. — Superficial Affections of the Glans Penis. (*Deutsche Med. Wochensch.*, 1885, No. 8.)

4604. Burchardt. — The Treatment of Eczema. (*Centralbl. für die gesammte Therapie*, May.)

4605. Dulles.—The Treatment of Onychia. (*Philadelphia Med. News*, 1885.)

Art. 4589. *Touton on Xanthoma.*—Dr. Touton (*Vierteljahrsschr. für Derm. und. Syph.*, 1885, Heft 1) contributes a paper on the histology of xanthoma, giving the results of an examination of eight cases, and reviewing the extensive and important recent literature on the subject. He describes the xanthoma-cell as being a cell with a well-defined membrane, finely granular contents, and a large rounded or oval nucleus. These contents are obscured by a mass of fat globules. The size of the cells varies between that of an epithelial cell and that of the largest giant-cells, such as are found in sarcomata. The smallest xanthoma-cells are spindle- or stellate-shaped and oval, the larger are rounded, oval, and round. The number of nuclei varies between one and twenty to thirty. These nuclei have a well-defined membrane, finely granular contents, and between the membrane and contents there is a small clear ring. They lie irregularly interspersed in the protoplasm. As a degenerated form there is the pigmented xanthoma-cell, which differs from the ordinary cell in that between the fat-drops and protoplasmic granulations there is a smaller or larger number of thick rusty brown pigment-granules. The fat in the xanthoma-cell differs from that in the subcutaneous fat-cell or the fat-cell of a lipoma. The fat-drops are smaller, and, under the action of osmic acid, take on a deep black instead of a dark brown colour. The xanthoma-cells lie mostly in smaller or larger lobulated masses. These arise through deposits of xanthoma-cells in the lymph-spaces of the adventitia of the blood-vessels, and of those of the connective tissue of the hair-follicle. The intermediate parts of the cutis are, in the majority of cases, less infiltrated. In the more advanced cases the cells are infiltrated more diffusely in the whole thickness of the cutis. The sweat-glands remain free. In extensive cases xanthoma-cells were found surrounding the nerve-bundles, but none were found between the fibres. The cells lie in a reticulum formed by the connective-tissue bundles and elastic fibres, although several cells may lie in immediate contact. Besides the xanthoma-cells and the connective-tissue bundles, the tumour contains a large number of apparently normal connective-tissue cells, whose nuclei colour apparently more darkly than those of the large xanthoma-cells. The author believes that these are partly normal connective-tissue cells, and partly cells which are derived from them, and represent the first stages of the pathological cells. The epidermis is in the great majority of cases normal. The author considers xanthoma to be a true tumour, and defines it as a tumour composed of newly formed connective tissue or epithelioid cells, in which fat is extensively deposited, and believes it to be allied to nævus pigmentosus. He suggests that the name endothelioma adiposum, or lipomatodes, might be appropriately assigned to it. The colour he believes to be due to the fat.

4590. *Hardaway on Multiple Xanthoma.*—Dr. Hardaway (*St. Louis Courier of Medicine*, October 1884) reports a case of multiple xanthoma, exhibiting on various parts of the body the plane, tubercular, and tuberose varieties of the disease. A remarkable feature of the case was the presence of the eruption in the line of a nerve. Commencing at the spine, and extending between the tenth and twelfth ribs, and obliquely upwards to the ninth rib, then crossing the ninth and tenth ribs on a line dropped from the axilla to the crest of the ilium, and then obliquely downward to the umbilicus, and strictly limited by the median line, are observable clusters of innumerable yellow xanthomatous tubercles, having the exact arrangement of herpes zoster. These clusters of tubercles form a band on the right side of the body two inches in width, and exactly limited by the spine in the rear and the median line in front. In three or four places a dozen or more tubercles have coalesced, making small quarter-dollar sized patches. Dr. Hardaway thus sums up the chief features of the case.

'1. It is established that a bronzed hue of the skin preceded the xanthoma by a number of years. 2. The eruption is perfectly symmetrical, with the exception of curiously arranged lesions on the side of the trunk. 3. The involvement of the mucous membranes, and the undoubted implication of the internal organs. 4. The peculiar configuration and location of the tubercles on the side, showing the probable influence of the nervous system in the evolution of xanthomatous lesions. 5. The presence of xanthomatous growths on tendons and in the areolar tissue, but more particularly the probable implication of bone structure in the same process. 6. The evidence, though slight, of sugar in the urine. 7. The patient states that some of the growths have disappeared, but of this fact I have no personal knowledge; it is clear, however, that new lesions are still constantly developing.

'From a careful consideration of this and other cases that have come under my observation, and a thorough study of the literature of the subject, I am inclined to suggest that xanthoma is a diathetic affection, and that its connection with the liver, and the frequent jaundice, occurs only in a secondary way. In other words, it seems to me plausible that when jaundice precedes the xanthoma it is because xanthomatous lesions have been primarily deposited in the liver; and unless this occur there may just as well be a xanthoma without jaundice—as has, in fact, often been seen—but that the liver is peculiarly prone to these growths, and that it is for this reason we see so many cases of xanthoma which have been preceded by, or associated, with jaundice. A study of the cases of hereditary xanthoma and of the numerous cases in which jaundice was absent, only lends strength to this view. It is also probable that, in persons having the xanthomatous diathesis, certain conditions of irritation, or unusual motion and the like, may provoke a local deposit *in situ*; for instance, in the lids, over joints, &c. Thus my patient may have had his peculiar zosteriform deposits evoked by an abortive zona.'

4591. *Auspitz on Granuloma Fungoides (Mykosis Fungoides Alibert).*—Auspitz (*Viertelj. für Derm. und Syph.*, 1885, Heft. 1) relates a typical case of this disease, in connection with which Dr. Hochsinger describes a micrococcus which he believes to be pathogenic. The case and the results of the investigations to which it gave rise are very noteworthy. The patient, a married woman who had not borne children, was healthy until the year 1877, when she began to suffer from dyspepsia. At the same time there appeared, more particularly on the skin of the back, scattered red maculæ of varying size, on which groups of vesicles were seated. The spots itched greatly. This macular and vesicular eruption, said to have disappeared at some parts, while it developed on others, had, after 1879, extended to the extensor surfaces of the forearms and the back of the hands, and to the forehead, particularly on the right side. The spots became abraded and raw, and the diagnosis 'eczema papulosum antibrachiorum et faciei cum anæmiâ' was given by Hebra in 1878. The case proved rebellious to treatment, and in August 1884 the patient for the first time consulted Professor Auspitz. At that time the diagnosis of 'chronic squamous eczema' was still applicable so far as the skin of the trunk and extremities was concerned, but the development and appearance of bare fungating growths on the scalp reminded Auspitz of the tumours described in literature under various names as granulating fungous mulberry-like growths, and whose chief characteristic consists in an excessive irregular growth of connective-tissue elements, or of a papillary outgrowth of connective-tissue substance on parts where such development does not take place normally. The largest of these fungating parts is described as being bright red, uneven, mamellated, formed of hard 'gyri,' similar in appearance to those of the surface of the brain, bleeding on slight provocation, secreting very little pus, here and there covered with crusts of colour varying from clear to black, the removal of which caused great pain, showing a few moist excoriations, and also in the midst of the deep red granulation-tissue grey shimmering silvery points and striæ. The integument at various parts was the seat of *plaques*, on which the skin was raw, cracked, and the seat of rhagades. Vesicles were also described on the mucous membranes, on the fauces, cheeks, and the point of the tongue. The patient was badly nourished, and her mucous membranes were pale. The results of treatment were not encouraging, and have no special bearing on the important question of the nature of the disease with which the paper chiefly deals. For microscopic examination were utilised portions of tissue excised from the hypertrophic growth of the scalp, hairs from the parts surrounding it, and scales from the various infiltrated *plaques* on the chest and extremities. The sections were double stained by lithion carmine and malachite green, and three distinct elements came under observation. In the midst of the fibrillar bundles of a dense connective tissue was intertwined a delicate succulent young connective tissue rich in cells. The fibres of this intercalary meshwork were besprinkled with grass-green cellular masses. The cells which formed these masses were unequally divided, were round, coarsely granular, and frequently undergoing fatty degeneration. In addition, the interfascicular young connective tissue contained round spindle and epithelioid cells. The tissue, as a whole, was poorly supplied with blood-vessels. The normal cutis-tissue had disappeared, and neither papillæ nor epithelium were present, their place having been taken by an exuberant growth of granulation-tissue. The deep staining by the green aniline dye was found to be due to the presence of a micro-parasite—a coccus. The cocci were all of equal size, and were very rarely found single or isolated, being observed in short chains or small masses. Their size was 0·9 to 1·2 of a micro-millimètre, and they were as a rule found as diplococci, with a scarcely measurable distance between the individuals; and were also frequently found as rows of streptococci, in rows of three to five. The rows of diplococci were frequently massed in heaps containing twenty to thirty pairs. No zooglœa was formed. No bacillus was ever found. These micrococci could be distinguished from the cocci of pneumonia, erysipelas, and gonorrhœa, as well as from those found in pyæmic abscesses and in diphtheritic membranes. The cocci were found in the round and epithelioid cells which were present in the young connective tissue. The same micrococci were found in the follicles and root-sheaths of the hairs in the immediate vicinity of the tumour, and in the scales of the flat eczematous-like infiltrated patches of the trunk and extremities. Dr. E. Schiff succeeded in growing these cocci in gelatinised meat-infusion and on potatoes, and states that the cultivated cocci produced in the skin of a young cat inflammatory changes characterised by thick infiltration and a granulating surface. When examined, this infiltration was found to contain cocci similar to those found in the skin of Professor Auspitz's patient.

4592. *Robinson on Trophic Lesions of the Skin following Cerebral Hæmorrhage.*—Dr. Robinson (*Journal of Cutaneous and Venereal Diseases*, vol. iii., No. 2) exhibited at a meeting of the New York Dermatological Society the following case. Rosanna N., aged 33 years, married, had had two children, the elder seven years, the younger four, both living and healthy. She had paralysis of the left arm and leg; the eyes were turned crossways; there was no paralysis of the muscles of the face. She was more or less insensible for two days. The eruption appeared two days afterwards like a 'cold' eruption, with spots on the left ala of the nose, front of the ear, temple, and on the scalp, all being situated on the left side of the median line; there was no eruption on the right side of the face. The left ala of the nose became almost destroyed; at the apex it did extend to the median line. The base of the wound was red, non-ulcerating, easily bleeding, the margin not elevated or indurated; no surrounding inflamed areola and no tubercles or cicatrices were observed. On the side of the face, directly in front of the ear, were two pea-sized spots of similar character, but with only slight loss of tissue. On the scalp there were six isolated spots, varying in size from a pea to a bean, with the same characters. All these spots were on the left side, and the eruption extended exactly to the median line. A few cicatrices, the result of previously necrosed spots, were to be observed in the same regions. All appeared suddenly, and presented the character of an acute serous inflammation with rapid destruction of tissue.

4593. *Leloir on Eczema of Flax-workers.*— M. Leloir (*Annales de Dermatologie et de Syphiligraphie*, vol. vi., No. 3) has observed a special form of eczema of the hands amongst the flax-workers of Lille. It occurs in the form of erythematous and vesicular eczema, or in the pustular and squamous forms. It is limited to those who work with moist flax, and appears to be caused by the water in which the flax is washed, which, being deficient in the salts of lime, is more than usually liable to cause maceration of the epidermis. It occurs only on the palm.

4594. *Guelliot on Epidemic Purpura.*— M. Guelliot (*Union Médicale du Nord-Est*; *Annales de Dermatologie et de Syphiligraphie*, vol. vi., No. 3) observed in infants between the ages of seven months and three years three cases of purpura. The eruption was preceded by convulsions, vomiting, and intense dyspnœa, then coma and, in one case, acute pain in the lumbar region. After a few hours purpuric spots appeared symmetrically on the anterior and inner surfaces of the thighs, at first dull in colour, then turning successively a bright red, purple, and finally black. In the three cases the course was rapid, death occurring after 14, 15, and 20 hours from the onset. The illnesses were attributed to unhealthy conditions of the street in which the children lived.

4595. *Cornil and Alvarez on the Micro-organisms of Rhino-scleroma.*—MM. Cornil and Alvarez (*Annales de Derm. et de Syph.*, vol. vi., No. 4) have found the bacteria which have been described in rhino-scleroma in preparations from five cases. The organisms are 2½ to 3μ long, and 0μ·4 to 0μ·5 broad. They contain coloured granules which resemble spores. The rod is surrounded by a capsule. Numbers of these encapsulated rods are found lying free in the tissue, between the fibrillæ of the reticulated fibres, around the large cells, in the spaces of the reticulum, or in the lymphatic vessels of the superficial or deep parts of the cutis. The capsule is formed by a hard, resisting, structureless colloid membrane. The bacteria are sometimes found joined two and two, both rods being contained in one capsule, which is sometimes constricted in the centre. Sometimes a group of four or five rods are enclosed in one capsule, the shape of the mass being irregularly spheroidal. Such a mass may be independent of any cell, but they are usually found in one of the large cells of the neoplasm. In the lymphatics they are found lining the wall of the vessel. The authors believe that the capsule with which these bacilli are invested is characteristic, and that the constancy with which they are present and their peculiar form constitute a strong presumption that rhino-scleroma is a parasitic disease.

4596. *Alexander on Treatment of Ringworm of the Scalp by Chrysarobin.*—Dr. Alexander (*Jour. of Cutaneous and Venereal Diseases*, vol. iii., No. 2) found excellent results from the use of chrysarobin in treating an epidemic of ringworm in a public institution. He used the pigment of chrysarobin (of the strength of 10 per cent. in liquor. gutta-perchæ). The method of using it was as follows: The hair was closely cut or shaven off all the heads which presented scaly patches; the scalp was thoroughly cleansed, and epilation by forceps of the hairs on the spots and for a short distance around them was practised. This left a clear, bald spot, the centre and greater part of which was thickened, infiltrated, and of a dark grey colour, contrasting sharply with the healthy skin around it. This discoloured area was then covered with a layer of the pigment, applied with a stiff brush. Nothing further was done until the artificial cuticle began to crack, or until the growing hairs began to push their way through it. The application was then renewed, and this was done twice or thrice a week. No attempt to isolate the patients was made, and no other precautions taken except to make them wear caps, to insist on frequent inspections and thorough cleanliness, and to attend to their general health. The patients, with few exceptions, did well. The exceptions were rare instances, in which a pustular dermatitis was set up by the pigment, and in these, of course, its use was suspended. In many of the fresh cases one or two applications of the mixture, without epilation, at once put an end to the disease.

4597. *Kaposi and Kundrat on a Case of Generalised Favus.*—Professor Kaposi (*Wien. Medizin. Presse*, Oct. 26, 1884) exhibited at the Medical Society of Vienna a remarkable case of favus in which the disease was present on many parts of the skin. The patient having died of phlegmonous inflammation of the popliteal space, the autopsy was made by Professor Kundrat, who found that there was favus of the stomach. In the neighbourhood of the pylorus there was a patch of infiltration about the size of a 2-franc piece, covered with necrosed tissue 2 millimètres thick. In the exudation spores and mycelium were found analogous to those present on the skin. It was not found in the intestine. The fungus appears to have provoked the disease of the stomach. The man had been a drunkard, and it is probable that the acidity of the gastric juice was sufficiently diminished to admit of the fungus developing; an explanation which, however, Professor Bamberger refused to admit. G. THIN, M.D.

4604. *Burchardt on the Treatment of Eczema.*—Dr. Burchardt communicates an article to the *Centralbl. für die Ges. Therapie* for May on the treatment of eczema, particularly the form affecting the eyelids and their neighbourhood, as well as the hairy scalp. He recommends the removal of the hair over the affected parts, and as much as possible of the crusts also, and then the brushing over of all the diseased surfaces with a 3 per cent. solution of nitrate of silver. This must be dried off immediately with a linen rag, more crust being removed at the same time, and the brushing then repeated, in the same manner, four or five times. The pain caused by the application soon disappears; and if a drop should enter the conjunctival sac through the carefully closed eyelids, no harm is done. Healing may be assisted by the application, after the brushing, of an ointment consisting of oil of cade, zinc, and vaseline; but this must not be applied near the eyes, as its entrance into them would cause much irritation. White precipitate ointment may take its place on the eyelids.

ALICE KER, M.D.

4605. *Dulles on the Treatment of Onychia.*—In the *Philadelphia Med. News*, 1885, Dr. Charles W. Dulles, of Philadelphia, speaks confidently of the following mode of treating onychia, which, though not novel, is not frequently described in text-books. The stinking sore is carefully washed in Condy's fluid, and the nail trimmed back to the matrix. Fine iodoform powder is then dusted over the sore, and covered with a turn or two of adhesive plaster. By this means both the smell is removed and the pain relieved. RICHARD NEALE, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

4606. BOHN.—Cancer of the Liver and Pancreas in an Infant. (*Jahrbuch für Kinderheilkunde*, Band xxiii. Heft 2.)

4607. MONTI.—A Case of Addison's Disease in a Boy Ten Years of Age. (*Archiv für Kinderheilkunde*, Band vi. Heft 4.)

4608. NAPIER.—Purulent Pneumonia from a Foreign Body in a Bronchus. (*Glasgow Med. Jour.*, Jan. 1885.)

ART. 4606. *Bohn on Cancer of the Liver and Pancreas in an Infant.*—The notes of the above case are published in the *Jahrbuch für Kinderheilkunde*, Band xxiii. Heft 2. Gertrude M., the first child of young and healthy parents, was nourished at the breast for the first six months, and seemed to thrive. At the beginning of the seventh month the mother happened to notice a hard lump, of the size of an apple, under the right ribs. This, together with the supervention of bilious vomiting, caused her to call in a medical man, who prescribed calomel, with poultices to the place. The lump, however, continued to grow. Dr. Bohn first saw the child on Dec. 10, 1884—three or four weeks afterwards—and then found the greater part of the abdominal cavity occupied by a swelling. The liver-dulness began at its normal level and descended uninterruptedly almost to Poupart's ligament; the left margin of the swelling passed upwards to the navel, and then, crossing the middle line, reached half way across the left hypochondrium. The tumour could be moved but very slightly laterally, and scarcely shifted with respiration. The abdominal walls were freely movable over the tumour, which, moreover, showed no signs of tenderness. The swelling had a solid feel, and its surface was irregular with lumps, of the size of a shilling, or larger, separated by deep grooves; there were also small protuberances, but in no case was there any feeling of softness or fluctuation. The free border of the tumour was hard, and, in places, knotty. The spleen was not enlarged. There were some dilated veins on the upper part of the abdomen. The functions of the other abdominal organs appeared undisturbed. The heart and lungs were normal. The diagnosis was carcinoma of the liver. The child was somewhat pale, and was said to have lost flesh; but there was no cachexia properly so-called. Latterly, the child became restless at night, thirsty, with rapid pulse, and a rectal temperature of 100°. The sclerotics were faintly yellow, and the urine high-coloured. Later, the whole skin became icteric, though the stools were almost black. The child continued to suck well; but the tumour increased, and, at last, petechiæ developed on the abdomen and limbs. The patient died quietly on Dec. 29, having, fourteen days previously, cut its first teeth. The *post mortem* examination was limited to the abdominal cavity. On opening this, about a pint and a quarter of clear sanguineous fluid escaped. The liver extended downwards to the anterior inferior spine of the ilium. Its surface was covered with nodules, varying in size from peas to plums. Between the nodes, the liver-parenchyma was of a deep green. The gall-bladder was distended, and its contents consisted of a thin colourless slimy fluid. The portal fissure was occupied by a mass of enlarged lymphatic glands, which invaded the lumen of both the portal vein and the hepatic artery. Another mass of glands, of the size of a man's fist, occupied the root of the mesentery, and involved the pancreas, which was only rendered visible by making a section through the mass. The liver, on section, showed much the same nodes and nodules as the surface. The spleen, kidneys, bladder, and genitals were normal, and there were no adhesions or deposits of lymph anywhere. The histological examination of the new formations in the liver and mesentery showed throughout the same structure—that of a typical carcinoma simplex. In the region of the head of the pancreas, the transition between the pancreatic acini and the cancerous structure could be made out. The author considers that the cancer began in the pancreas, when the child began to waste, at six months of age. Two months, therefore, sufficed to involve the liver to the enormous extent indicated and to destroy life. [The weight of the liver is not given.—*Rep.*]

4607. *Monti on a Case of Addison's Disease in a Boy Ten Years of Age.*—Professor Monti, of Vienna, has communicated the notes of this interesting case to the *Archiv für Kinderheilkunde*, Band vi., Heft 4. The boy in question was strong and healthy, with the exception of a slight attack of measles, until the age of six; the skin was quite normal in colour. In July 1880 he fell suddenly ill without any apparent cause. He had fever, with morning remissions, pain in the stomach, abdomen, and head, occasional vomiting, diarrhœa alternating with constipation, and drowsiness, culminating in heavy sleeps which lasted two or three days and during which no nourishment was taken; on awaking, the child was very weak and was excessively emotional. At the end of fourteen days, the mother noticed a peculiar yellowish-brown discolouration of the skin of the hands, and this within a few weeks spread to other parts of the body. After about five weeks the fever ceased, and the digestive and nervous disturbances gradually disappeared, but the discolouration remained. In the course of the summer the child had attacks, lasting two or three days, of headache, with vomiting, abdominal pain, and diarrhœa. In October 1880 the boy had another illness resembling that above described, and lasting from three to six weeks, during which the brownish colour became darker. The child recovered and remained fairly well until the end of March 1881, when the mother first noticed that the cervical glands were more or less swollen, and that there was a slight swelling on one of the knuckles. During 1882 the child was much the same; the muscular system was weak, but he was able to go to school. He had two more feverish attacks, one in the spring, the other in the autumn, each lasting about four weeks. The attack reappeared in April 1883, and Professor Monti first saw the case on May 10. The child was tall, thin, and weakly built. The hair was silky, a dark blonde. The skin of the face, neck, and hands was of a dark greyish-brown colour; the sclerotics were a dirty white; the iris was light grey; the nails white. The skin of the thorax, back, and abdomen was greyish-yellow; the lower extremities were yellowish, the buttocks and perinæum darker. There were several brown spots on the external ears. The mucous membrane of the mouth was of a pale red; that of the lips and cheeks presented several brownish-black spots arranged in groups. The tonsils were enlarged. The mucous membrane of the nose and of the prepuce was pale. The epidermis was everywhere smooth. The glands of the neck were swollen; the tongue was clean; pulse 80; respiration 24. The thorax and its organs were normal. The abdomen was prominent; palpation painful, and especially so in the umbilical and ileo-cæcal regions. The liver was normal, the spleen somewhat enlarged. The inguinal glands were normal. The urine was light yellow, acid, of specific gravity 1017; no albumen or other abnormal constituents; quantity natural. The blood was pale, but there was no apparent increase of white corpuscles. The temperature was normal. The patient appeared in a state of mild nervous excitement: sometimes crying, sometimes laughing. The bowels regular; he slept and ate well. On June 25, 1883, the boy had one of his usual feverish attacks, and was attended at his own home by Professor Monti's assistant. He slept almost continuously the first four days, and was quite undisturbed by the numerous flies that settled on his face. When roused, he gave his answers slowly but correctly. The pupils were equal, reacting normally to light; there was no strabismus. On sitting up the patient swooned. The glands of the neck were more enlarged. The abdomen was retracted; both hypochondria, but especially the right, were tender on pressure. The urine was normal. Within fourteen days the symptoms had subsided, and the child returned to school. On March 7, 1884, the headache, dulness, and weakness reappeared, and were followed in the night by excitement, delirium, and occasional loss of consciousness. Soon after midnight the child became somnolent, and towards morning death ensued upon an eclamptic fit. At the *post mortem* examination the dura mater was found tense, thin, and hyperæmic, its inner surface shiny and smooth. The longitudinal fissure was filled with fibrinous masses. The brain-substance was soft, not congested. The posterior horns of both lateral ventricles were distended with serum. The heart was flabby, and of a dark brown colour; the valves were healthy. The right lung was partly solid at the apex. The liver was enlarged and softened. The spleen was enlarged. The mesenteric glands were as large as hazel-nuts. The right suprarenal capsule was completely wanting, as well as its artery and vein. The left suprarenal capsule was very small; the greater part of its substance appeared to consist of rather vascular connective tissue. The kidneys were correspondingly large, and somewhat softened. The bladder was normal. Ralph W. Leftwich, M.D.

4608. *Napier on Purulent Pneumonia due to the Presence of a Foreign Body in a Bronchus.*—Dr. A. Napier, of Glasgow, describes this case in the *Glasgow Med. Jour.*, January 1885. G. T., aged 4, previously a healthy boy, was first seen Oct. 12, 1884. He had been ill four days with peculiar short cough, accompanied by what was described as a suppressed sneeze, pyrexia, furred tongue, &c. Temperature 103° F.; pulse 140; respiration 70, with dilatation of nostrils. The cough was frequent and short, without expectoration. Severe pain was referred to the pit of the stomach, and complained of to the last. There was comparative dulness over the right back from the base to the middle of the scapula; no râles. There was a comparatively feeble respiratory murmur. Next day, there were physical signs of effusion. Up to Oct. 17 the temperature was 103°·5 to 104°·5 F. (always higher in the morning). This day it fell below 100° F. Breathing was slower and easier. On Oct. 20 there was some fever (with morning rise and evening fall of temperature). He had sweating about the head. Expectoration was now purulent, with a peculiar fœtid odour, but not the odour of gangrene of the lungs. On Oct. 26, Dr. Macewen resected a part of the seventh rib, after inserting an aspirator-needle in three places ineffectually. No pus escaped. On introducing his finger, Dr. Macewen found a large but shallow cavity bounded on all sides by adhesions; the lung was consolidated. A drainage-tube was applied, and the part was dressed. Temporary improvement followed. Some fœtid matter escaped from the wound. On Nov. 1 the child died, apparently from exhaustion, preceded by diarrhœa. A *post mortem* examination was made forty-eight hours after death. The wound had gangrenous edges; the liver was pushed down for 1½ inch, the left lung and heart were normal. The right lung was solidified throughout, the upper lobe was smooth, there was recent hepatisation; the lower lobes were adherent everywhere, except opposite the wound, with a dirty greyish-green appearance and very fœtid odour; there was a shallow wound of the lung opposite the operation-wound, and numerous abscesses, all fœtid, were observed on incising the lung. On slitting up the bronchus, a foreign body was found firmly lodged beyond its first subdivision, blocking up the bronchus communicating with the two lower lobes. It was imbedded in a deep groove in the side of the bronchus, and the mucous membrane around was deeply injected. The air-passages below were full of fœtid pus. The foreign body was $\frac{7}{16}$ inch in length, $\frac{5}{16}$ inch broad, and weighed 4 grains; it consisted of elder-pith. There was no history of any foreign body, no initial paroxysm of coughing, no hæmorrhage, no localised pain. The indication for treatment of such a case, when its cause is early enough recognised, is, Dr. Napier says, clearly to remove the foreign body as soon as possible, even when it seems to be giving rise to but little disturbance. E. J. Edwardes, M.D.

Oppenheimer of Heidelberg, in a recent work on ophthalmia, attributes the frequent appearance of this affection among new-born children to the presence of gonococcus in pregnant women. This agent of infection the author believes exists in the proportion of 27·7 per 100 of pregnant women. Antiseptic solutions ordinarily used are not strong enough to destroy it; bichloride of mercury, creosote, and nitrate of silver are more effective.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

4609. Bennett (Hughes) and Campbell.—A Case of Brachial Monoplegia. (*Brain*, Part xxix.)

4610. Tarnowski.—On Alterations of the Spinal Cord caused by Stretching the Sciatic Nerve. (*Archives de Neurologie*, vols. ix. and x. 1885.)

4611. Catsaras.—The Curability of Multiple Sclerosis. (*Archives de Neurologie*, vol. x. p. 66.)

4612. Jonin, L. S.—Concerning the Function of the Lentiform Nucleus. (*Arkhiv Psikhiatrïi*, &c., vol. iii., Part 3, 1884, pp. 134-38.)

Art. 4609. *Bennett and Campbell on Brachial Monoplegia.*—Dr. Hughes Bennett and Dr. Campbell (*Brain*, Part xxix.) have recorded a case of brachial monoplegia, due to lesion of the internal capsule, in a man, aged 80, who showed at various times some more general cerebral symptoms, such as imperfect deglutition, incontinence of excreta, drowsiness, &c. Throughout the illness, which lasted about two months, the left arm was completely paralysed, the muscles flaccid, and without a trace of rigidity, sensibility being everywhere normal. Facial and laryngeal paresis appeared for a few days at the beginning of the illness, but vanished later on. After death a softened area, of the size and shape of a horsebean, was found at the upper part of the internal capsule, between the caudate and lenticular nuclei, which latter were normal. The interest of the case lies in the limitation of permanent paralysis to the arm, while diffuse disease of the same region causes ordinary hemiplegia. The case, therefore, seems to show that the fibres conducting motor impulses from the cerebral cortex run in separate bundles through the internal capsule. Round the fissure of Rolando are situated the centres presiding over the voluntary movements of the trunk, leg, arm, and face of the opposite side of the body, the centre for the trunk being the most superior, posterior, and internal, while that for the face is the most inferior, anterior, and external. The four bundles of conducting fibres descending from these centres in a downward and obliquely inward course may therefore be compared to four rays of a half-opened fan, which change their direction when entering the knee of the capsule, so that the fibres for the face become the most anterior, behind which are then found successively those for the arm, leg, and trunk. That some such arrangement existed had already been suggested, especially in a recent paper by V. Horsley on 'Substitution.' The present case is incomplete, inasmuch as the exact antero-posterior position in the internal capsule, which this limited lesion occupied, could not be demonstrated, owing to permission not being granted to remove the brain for further investigation.

4610. *Tarnowski on Alterations of the Spinal Cord caused by Stretching the Sciatic Nerve.*—P. Tarnowski (*Archives de Neurologie*, vols. ix. and x., 1885) has experimented on the above subject in rabbits, and found that stretching the sciatic nerve with a certain force causes traumatic irritation with capillary hæmorrhages at different levels of the spinal cord, and leads eventually to atrophy of the posterior columns and horns, and to vacuolisation and wasting of the nerve-cells of the anterior horns of the cord. She is therefore at a loss to imagine what good could be done by such results to patients suffering from tabes, and arrives at the conclusion that physiological data enable us to say that such an operation must always be prejudicial to the patient, the degree of the harm done being proportional to the force used, but that it can never lead to decided relief, much less to a cure. This agrees with the fact that, on analysing the published cases, it is found that very frequently the symptoms of the malady became aggravated after the operation, that some patients died, and that not a single case was cured. Pauline Tarnowski has, however, only succeeded in slaying the slain.

4611. *Catsaras on the Curability of Multiple Sclerosis.*—Catsaras (*Archives de Neurologie,* vol. x., 1885, p. 66) has published a case of multiple cerebrospinal sclerosis in a lad, aged 18, which, after having shown serious symptoms, more especially of a cerebral character, eventually got perfectly well of all of them, and remained well up to date. The diagnosis in this case was confirmed by Charcot. Catsaras thinks that the cure must be explained by regeneration of the nerves, more especially by the restoration of the myeline sheath of the nerve-tube, which is habitually found destroyed in this disease, while the axis-cylinder remains intact even at an advanced period of it. Restoration of a number of nerve-fibres, which may be considerably below the normal average, may yet be sufficient to give the clinical result of a cure. Amongst the unknown conditions which favour regeneration, he counts the age of the patient and treatment at an early period of the disease. His own patient was aged only 18, and in another case which recovered, and has been described by Wilson (*Med. Times,* 1876) the age of the patient was only 8. The treatment in Catsaras' case consisted of 'pointes de feu' applied to the spine, hydrotherapeutics, ergotine, and, during the apoplectiform and epileptiform attacks, elixir d'Yvon and hydrobromate of quinine.

JULIUS ALTHAUS, M.D.

4612. *Jonin on the Function of the Lentiform Nucleus.*—In the *Arkhiv Psikhiatrii,* &c., vol. iii., Part 3, 1884, p. 134, Dr. L. S. Jonin, of Kharkov, contributes an interesting case of a strictly isolated lesion of the lentiform nucleus, which positively speaks against the supposition of Schuepel, Pitres, Lepine, Persyn, Schuetz, Bramwell, Fuerstner, Rondot, Bourneville, &c., that the nucleus is destitute of motor function. The case was that of a puerpera, about 35 years of age, who was admitted to the Zemsky Hospital in a comatose state with right hemiplegia, aphaxia, systolic murmur at the cardiac apex, involuntary micturition, and fœtid dirty-reddish vaginal discharge. The patient died about thirty-six hours after her admission. The necropsy revealed embolism of the left artery of the fossa Sylvii, the embolus continuing into the arterial branches for the lentiform nucleus, third frontal, and temporal gyri. Red softening involved the posterior parts of the gyri named, but it was especially well pronounced in the nucleus lenticularis, where it destroyed the external limb, leaving intact the middle limb, as well as the external and internal capsules. There were found also ulcerative endocarditis, septic perimetritis, parametritis, and endometritis, renal infarct, &c. Dr. Jonin thinks that his case confirms the view of Professor Meynert, according to which the external limb of the nucleus lenticularis presents an internodium linking the projection-system of the first order with that of the second. [Meynert's opinion has found a substantial support in elaborated researches of Professor P. J. Kovalevsky, of Kharkov, who, having examined the structure of the lenticular body in the man, ape, dog, dolphin, wild goat, guinea-pig, rabbit, mole, and bat, arrived at the following conclusions. 1. The external limb of the lenticular body receives cerebral bundles directly from the corona radiata, capsula interna, and capsula externa. 2. A part of the bundles is terminated at the external third of the external limb of the lentiform body. Another portion of the bundles passes through the whole external limb in the lamina medullaris and the second limb. 3. From the internal third of the external limb of the lenticular body there originate new bundles which pass in the middle limb. 4. The latter receives fascicules from the corona radiata through the external limb of the lenticular body, as well as from the capsula interna and lamina medullaris. 5. The internal limb of the lenticular body receives bundles from the capsula interna, and partly from the middle limb of the lenticular body. 6. The latter and the striated body present one ganglion divided into two parts by the internal capsule. 7. In some animals the caudated nucleus contains the bundles from the corona radiata. (*See* the *Meditz. Oboz.*, Dec. 1882, p. 904, and the *Sitzungs. der K. K. Akad. der Wissensch. Wien,* 1882.) The existence of a connection between the external limb of the lenticular body and the cortex was proved also in 1883 by Dr. Mendel's independent researches.—*Rep.*]

V. IDELSON, M.D.

REVIEWS.

ARTICLE 4613.

On the Anatomy of the Intestinal Canal and the Peritoneum in Man. By FREDERICK TREVES, F.R.C.S., Hunterian Professor at the Royal College of Surgeons of England; Surgeon to and Lecturer on Anatomy at the London Hospital. London: H. K. Lewis. 1885.

THESE lectures, the Hunterian for 1885, form one of the most valuable contributions to abdominal surgery of recent times. They are based on a systematic examination of one hundred subjects, on the dissection of fœtuses of various ages, and of forty different species of the mammalia. The following is a brief digest of the results obtained.

1. *Length of Intestinal Canal.*—Average in adult male, 22 ft. 6 in. (extremes, 31 ft. 10 in.—15 ft. 6 in.); in adult female, 23 ft. 4 in. (extremes, 29 ft. 4 in.—19 ft. 10 in.). Average length of colon in male, 4 ft. 8 in.; female, 4 ft. 6 in. (extremes, 6 ft. 6 in.—3 ft. 3 in.). The difference in length appears, in the opinion of the author, to depend on the nature of the food, the vigour of the digestive process, and the activity of the abdominal nervous centres. In the fœtus at full term the length is fairly constant, its average being 9 ft. 5 in. During the first month it grows about two feet and the same amount in the second. The rate of growth then becomes irregular. The large intestine remains about 1 ft. 10 in., its length at term, until the fourth month, when growth commences.

2. *Duodenum.*—Mr. Treves agrees with that description of this portion of the intestine which divides it into four stages, the fourth being the terminal vertical or second ascending portion.

Emphasis is laid on the important function of the musculus suspensorius duodeni.

The fossa duodeno-jejunalis, a seat of mesenteric hernia, receives special and well-deserved attention. In the hundred bodies it was met with forty-eight times. The plica duodeno-jejunalis forming the pouch is a fold of serous membrane coming off from the parietal peritoneum on the left side, and very commonly corresponding to the position of the inferior mesenteric vein, and attached to the anterior surface of the duodenum. The fossa is triangular, its opening looking directly upwards, and its vertical depth varies considerably, in well-marked specimens being 1½ in. It normally lodges in the duodeno-jejunal bend. The fossa appears, in Mr. Treves' opinion, to depend upon the obliteration of the meso-duodenum. Another mesenteric hernia in the same region is the meso-colic, described by Sir Astley Cooper, and, according to some authors, derived from the duodenal fossa. Mr. Treves differs from this view. The orifice of the sac is some way removed from the duodenal bend; the commencement of the jejunum is not involved in the rupture, and a branch of the inferior mesenteric artery runs along the free anterior margin of the orifice of the sac. It is by this artery that the pouch is formed, according to the author, and this being so, it would have a totally different signification to the fossa above mentioned.

3. *Meckel's Diverticulum.*—No example was met with in the hundred cases, nor in any of the fœtuses examined. [We have met with it thrice in four hundred cases.—*Reviewer.*]

4. *Mesentery.*—The length of the parietal attachment averages six inches, the mean measurement from spine to intestine being between eight and nine inches. The longest portion is that passing to coils between six and eleven feet from the duodenum, and here the measurement may reach ten inches. These figures are of extreme interest in connection with the subject of femoral and inguinal herniæ. The author remarks, 'If the fresh body of an adult be opened, and the condition of the viscera and peritoneum be normal, it will be found that it is impossible to drag a loop of small intestine through the femoral canal, artificially enlarged on to the thigh, or down the inguinal canal into the scrotum. In fact, no coil can, in any part, be drawn out of the abdomen below a horizontal line on a level with the spine of the pubes. It is evident, therefore, that in a femoral or scrotal hernia the mesentery must be elongated.'

The subject of mesenteric holes is next treated. Those not caused by violence are located by the author in an oval patch, bounded by the anastomosis of the arteria ileo-colica with the last vas intestini tenuis. This area is extremely thin and devoid of fat, mesenteric glands, or visible blood-vessels. In one case it was found to have a thickened margin, and to be perforated with holes. This, taken in connection with the facts that most of the described cases of strangulation of intestine in mesenteric holes occur in the portion near the termination of the ileum, and that their neck is usually partly circumscribed by a branch of the superior mesenteric artery, seems to render Mr. Treves' argument complete.

5. *Arrangement of Small Intestine.*—The result of Mr. Treves' laborious observations goes to prove that any localisation of the coils of small intestine in the adult is an impossibility. Of great importance, however, are his observations as to the coils which may occupy the pelvis. These belong to two intestinal regions—viz. (1) terminal part of the ileum, a fact of course well known, and (2) that part of the intestine described above as possessing the longest mesentery. Thus coils of intestine as much as 14 feet apart may be side by side in the pelvis, a fact certainly up to now not awarded due prominence. In cases of abnormally long mesentery, of course, a much larger portion of intestine may occupy the position under discussion.

6. *Cæcum.*—Variations in this portion of the intestine are classified by the author under four groups distinguished by more or less similarity to or departure from the fœtal condition. *a.* This, the fœtal form, is conical in shape. From its apex the appendix arises, and this apex is about in a line with the long axis of the colon, and corresponds very nearly to the centre of that intestine. The longitudinal muscular bands are nearly equidistant from one another. This was found in 2 per cent. of the cases. *b.* This differs from *a* by the loss of the conical outline and the substitution of a more quadrilateral shape. It was met with in 3 per cent. of the cases. *c.* The part on the right side of the anterior band increases at the expense of that on the left, and the anterior wall at that of the posterior. Thus the true apex is carried over to the left and placed in close proximity to the ileo-cæcal junction. This is the usual form, and appears to depend upon the richer blood supply of the right side of the anterior band. *d.* This is characterised by excessive development of the right side and atrophy of the left, so that the original apex is lost, and the appendix appears to spring almost from the ileo-cæcal junction. It was met with in 4 per cent. of the cases, and once in a fœtus at full term.

The chief variations are in size: one large cæcum was so mobile that its apex could be made to touch a point on the front of the thigh, six inches below the anterior superior iliac spine. The average breadth is three inches, and length two and a quarter.

Mr. Treves, approaching the subject of the relations and connections of the cæcum with a mind free from prejudice, finds himself compelled to disagree with the ordinary text-book description, which he designates a 'real anatomical property,' and one which 'descends from one author to another with the precision of entail.' He goes on to state, 'I have never found the posterior surface of the cæcum uncovered by peritoneum. I have never found it attached by areolar tissue to the iliac fascia; and I have not met with one single example of a meso-cæcum. I am very much disposed to doubt the existence of such a fold as the last named. Not only is the posterior aspect of the cæcum clad with peritoneum, but on the average also 1¾ inch of the ascending colon. It would, therefore, be impossible to reach the cæcum extraperitoneally through the loin.'

7. *Appendix Vermiformis.*—Average length, four inches (extremes, 1—6). The permanent size it soon attains. In three cases it was practically obliterated, being bound down by peritoneal adhesions, the result of an old perityphlitis. Instead of lying in its ordinary position behind the end of the ileum and its mesentery it may ascend vertically behind the cæcum. In four such cases the tip was in close proximity to the liver, and would have been met with in a right lumbar colotomy. In one case the appendix passed horizontally across the lumbo-

sacral eminence, so that its tip rested on the left psoas muscle.

8. *Ileo-cæcal Fossæ.*—Mr. Treves proposes to reduce the number of these pouches described as commonly existent to two. Of these, the superior ileo-cæcal is limited by a fold of peritoneum produced by the passage of a branch of the ileo-colic artery to the anterior surface of the cæcum. The second, or inferior ileo-cæcal, is bounded by ileum and caput coli, and formed by the appendix mesentery and a fold passing to it over the ileo-cæcal junction on its inferior aspect, from the border of the ileum most distant from its mesentery. This pouch is much larger and more constant than the superior. The fold last mentioned is believed by the author to be the remains of the true mesentery of the cæcum and the appendix.

9. *Non-descent of Cæcum.*—Two instances of this abnormality were met with, the cæcum being placed immediately under the liver, and just to the right of the gall-bladder. In two other cases the cæcum lay in the right iliac region, but had no peritoneal connection with the posterior parietes, being clad by peritoneum continuous with the mesentery.

10. *Meso-colon.*—This may be expected to be met with in 36 per cent. of all cases on the left side, and in 26 per cent. on the right.

11. *Sustentaculum Hepatis.*—A fold thus denominated, comparable with that on the left side called sustentaculum lienis, is described by Mr. Treves as occasionally occurring. When present it passes from the right side of the ascending colon to the parietes, at or a little above the level of the highest part of the iliac crest. It was met with in 18 per cent. of the cases.

12. *Transverse Colon.*—Average length, 20 inches (extremes, 12—33). The proportion of cases in which the whole or nearly so was above or below a line drawn transversely across from the highest point of either iliac crest was as four to one. The deviations in shape generally tend in the direction of the production of a V or U shaped bend which may become attached by peritonitis, (*a*) by its apex to the pelvic parietes or a pelvic viscus, (*b*) by either limb to the ascending or descending colon, thus producing a double tube in either position. These deviations are considered to be due to pathological or developmental causes. In the former case chronic constipation is the most general cause, in the latter there is a return to a distortion constant in some animals (*e.g.* spider-monkey and lemur), and often noticed in a slight degree in fœtuses.

13. *Sigmoid Flexure and Rectum.*—Mr. Treves considers the accepted account of the sigmoid flexure and first stage of the rectum unsatisfactory, and would prefer to describe these portions of intestine together as the omega loop, its shape when unfolded. Its average length is 17½ inches (extremes, 6—27). The normal position of the loop is wholly in the pelvis. It may not be situated there when the bladder or uterus is distended, when a large cæcum occupies the pelvis, or when the loop itself is much distended. Morbid adhesions appear singularly common in connection with the meso-colon belonging to this loop. These are most common over the psoas.

14. *Intersigmoid Fossa.*—This pouch is produced by the sigmoid artery, its opening is seen on the left side of the sigmoid meso-colon, its long axis is directed downwards and to the left, and it varies in depth from 1 to 1½ inch. Two cases of strangulated hernia have been recorded as occurring in this fossa. BERTRAM C. A. WINDLE, M.D.

ARTICLE 4614.

The Pathology and Treatment of Stricture of the Urethra and Urinary Fistula. By SIR HENRY THOMPSON. Fourth Edition. London: J. & A. Churchill. 1885.

THIS work has become so recognised a guide in the branch of surgery of which it treats, that a fourth edition is sure to be well received, and we examine it with interest. We look to find here the author's mature experience on many points which have been wanting settlement, and we also look at the work as being intended for a guide to surgeons and students in a very important subject. The author embodies in the work much that he has lately given in his lectures before the Royal College of Surgeons, and he has almost written afresh the greater part of the book. It is pleasant to find that a new edition can be produced which diminishes the bulk of the original by nearly one hundred pages, and yet contains more of the author's mature opinions. This has been done by leaving out illustrative cases, and by omitting matter which in the former editions related to controversial points then under discussion, but since, for the most part, settled.

We are glad to find an important table retained, which now includes 217 cases, showing the causes of organic stricture, and summarised at the end of the fourth chapter. The illustrations are increased in number, and add to the value of the work. The writing is clear, as we might expect from the author's well-known powers.

Sir Henry Thompson is a recognised advocate of internal urethrotomy, and we find his experience of the operation and its results in 'the expressions of a strong conviction that internal urethrotomy, fully and completely performed, should be resorted to as the best and safest treatment of stricture, as soon as the easy use of the bougie fails to maintain the urethra patent or to allay signs of irritation in the bladder arising from the obstructed urethra. It is the best means not only for relieving urethral obstruction and its painful symptoms, but for insuring the future sound condition of the more deeply seated organs.'

He does not believe in the risk of long-continued catheterism, about which a good deal has been talked of late. 'The real relation which the word "catheter" has with "fever" is that the latter has arisen because the catheter was not used soon enough, and not as a result of its application.' But we think more stress might have been laid than is done in the book, upon the necessity of extreme cleanliness of the instruments used; and, when frequent catheterism is necessary for the withdrawal of urine, the use of india-rubber instruments should, we think, be strongly urged.

He still condemns the use of caustics in the treatment of even old cartilaginous strictures, but we cannot help noticing that one form of caustic is condemned because another form evidently fails, and he does not seem to have ever used it himself. That there are cases in which a judicious use of this means proves eminently successful we know from experience, and that extreme care has to be employed in its use is not a valid argument against it any more than against many operations of a delicate nature.

He remarks on Dr. Otis's views of the extreme distensibility of the urethra, that long ago large instruments were somewhat heroically used by Boyer and by Mayer of Lausanne, and with results which led to a natural reaction in favour of small ones. Hence probably the urethra came to be underestimated as to its capacity of being stretched, and Dr. Otis has called attention to the fact with certain advantage. These views are, however, he thinks, extreme, and he urges a caution that the urethra is a very delicate and sensitive passage, never to be stretched beyond certain limits without incurring risks which are sometimes very grave.

His views with regard to the endoscope are that it is of very little value, and he has never found it of the slightest use in stricture. This accords with our own experience, but whether the use of the electric light will possibly assist the objects of the instrument remains to be seen. He retains his preference for the use of the old-fashioned but excellent material of the English gum-elastic catheter, and recommends simple olive-oil for lubricating the instruments which have to be introduced into the urethra. Celluloid materials are condemned as not possessing that plasticity with firmness which he considers essential for this class of instruments.

In the surgical treatment of urinary fistula the directions of the author are clear and forcible, and will, we think, be accepted as the sound judgment of a surgeon who, after a long experience, prefers the simplest forms of treatment to heroic remedies. A summary of his observations is given at the end of Chapter XII., and should be carefully read by every surgeon who may have to treat this difficult class of cases. We do not find any reference to the use of catgut sutures, nor to the author's views as to the advisability of stitching the mucous membrane separately under any circumstances.

The work is a valuable one, as might be expected, and will maintain the high reputation of the author. Its subject is defined, and within its limits it would be difficult to find a clearer and more thorough exposition of what should be known by student and practitioner. Every surgeon will, of course, have his preference for materials, instruments, and modes of using them, and also will have his special experiences; but the views of Sir Henry Thompson upon all matters connected with this branch of surgery must command respect, and his judgment is as sound and temperate as his experience is probably unrivalled. W. W. Wagstaffe.

Article 4615.

Handbook for the Instruction of Attendants on the Insane. Prepared by a Sub-Committee of the Medico-Psychological Association appointed at a branch meeting held in Glasgow on Feb. 21, 1884. 8vo., pp. 64. London: Baillière, Tindall, and Cox. 1885.

This useful little work was set going mainly through the energy of Dr. A. Campbell Clark. The other joint authors are Dr. C. M. Campbell, Dr. A. R. Turnbull, and Dr. Urquhart, all medical superintendents of Scottish asylums. Having been at several meetings of the Northern branch of the Medico-Psychological Association when the undertaking was considered, the reviewer can bear witness to the severity of the scrutiny to which the proofs were subjected. One or other of the authors may think that all the fault-finding of the writer of this critique should have come in at that time; but he feared that they would be bewildered by the floods of objections, corrections, and additions poured upon them by their censors. Since then the auspices of the handbook have so much improved that it can well stand free criticism. Clothed in a neat binding, with the name of a London medical publisher, it goes forth to make its way amongst the asylums wherever our language is spoken. Several of the larger English asylums have already manuals of the kind, some of them as copious, but heavily ballasted with special regulations. The present handbook is of a more general character, not intended to override the rules of any institution, but conveying instruction which the attendants of every asylum should know. Surely an attendant should not be left to learn his onerous duties empirically; the superintendent cannot escape giving some instructions, and, even granting that the handbook does not contain all the needful directions, it contains many or most of them. The superintendent and his assistants are thus saved a good deal of talking or lecturing. They can refer the attendant to this or that passage in the book, nor can he deny that he was ignorant of any precaution or consideration which is printed in a volume put into his hand.

The first nineteen pages are occupied by a popularised essay on 'The Body and its General Functions and Disorders.' It seems doubtful whether any real knowledge can be conveyed in so short and summary a form about a machine of such a complicated nature as the human frame. To tell an attendant that a man differs in appearance from the lower animals, and that the body is not solid, is rating his intelligence too low; to inform him that the nervous system 'is composed of three materials, grey matter, white matter, and cement substance,' is an attempt to convey knowledge which he is neither likely to perfect nor to use. On the other hand, it is important to teach the attendant to make observations on the state of the pulse, whether the patient be faint or have feeble respiration, or to be able to note the condition of the skin and the state of the urine, &c.

Chapter II., 'On Nursing the Sick,' is well treated. The directions for noting symptoms, applying dressings and fomentations, administering enemata and suppositories, and other duties which habitually fall to the attendant in an asylum or hospital, are concise, clear, and practical. A few sentences might be added as to what to do in a case of choking. The attendant is told that, 'until aid comes, all food should be removed from the mouth, the body of the patient inclined forwards, and his back be sharply clapped with the back of the hand.' He should be told to push his fingers down as far as he can, and pull up or dislodge any bit of food he finds sticking in the throat. If this were done, many lives could be saved. It is all very well saying that medical aid must be instantly summoned: unless the medical man be quite at hand, he will probably arrive too late.

The hints in case of poisoning seem scarcely sufficient for an asylum, where accidents and attempted suicides are not uncommon incidents. All that is said is that 'vomiting may be encouraged by tickling the throat, and by the administration of warm water with a little mustard added to it.' In our opinion, antidotes for poisoning, such as animal charcoal, should always be in readiness, and the principal attendants should have solutions of sulphate of zinc in graduated bottles, with directions how to use them.

In Chapter III., 'Mind and its Disorders,' we come upon the special field of an asylum. There is a good description of the nature of the delusions and of the forms of insanity which an attendant ought to be able to distinguish.

Chapter IV. is on the 'Care of the Insane in Asylums and Private Houses.'

Chapter V. is 'On the General Duties of Attendants,' and the precautions which they should bear in mind.

In conclusion, it may be fairly said that this handbook will be of unquestionable usefulness in any asylum, whether in the British Isles, the United States, or the Colonies. W W. IRELAND, M.D.

ARTICLE 4616.

Surgical Uses other than Hæmostatic of the Strong Elastic Bandage. By HENRY A. MARTIN, M.D., Brevet Lieutenant-Colonel and late Surgeon U.S. Volunteers. (Reprinted from the Transactions of the American Medical Association for 1877.) Second edition. Boston: Wright & Potter Printing Company.

THIS pamphlet includes some personal explanations with regard to imitations of the now well-known 'Martin's Bandages,' which have failed to meet with the inventor's approval. Dr. Martin is certainly justified in insisting that his appliances should be made of the most carefully prepared rubber. His opinion against the employment of a perforated modification of the bandage of course demands attention. The perforations, he declares, render the bandage very liable to be torn, and to become useless; and practice has proved that they do not accomplish their professed aim of affording a means of escape for the moisture which is often copiously formed under the bandage. The skin which is surrounded by the border of each perforation becomes congested, or even develops pustules. As Martin's bandage is somewhat costly, it is right that its inventor should warn the profession against any unadvisable innovation, and give precise rules for its application to diseased parts.

It is in the treatment of varicose veins and ulcers of the leg that the bandage is of greatest repute in the British islands. An elastic stocking deteriorates in efficacy from the day that it is first worn. A webbing bandage is of far higher value if once the patient can be taught to apply it properly, and the moral effect of teaching a patient to take care of himself is excellent. Martin's bandage is still more useful, but requires certain precautions. Dr. Martin admits that irritation of the skin is not unknown. We do not think that the irritation ever becomes intolerable, except in some poor or careless people—that is, in patients who have not the conveniences for cleansing the limb whenever the bandage is taken off, and in those who will not cleanse it. Those who are so frightened at a little redness and itching that they discard the bandage after wearing it for only a few days, can hardly be taken into account when the merits of the appliance are considered.

Dr. Martin points out that the sweating out of the sulphur contained in the rubber gives the bandage an ugly appearance at first, but believes that the sulphur is often beneficial to the skin which it touches. His directions for application of the bandage in cases of varicose ulcer are worth quoting. The patient must be directed to apply the bandage ere he arises from his bed, before the veins of the leg become distended by the impeded column of blood within them. It should be applied just sufficiently firm not to slip down. The moment after the foot is put to the ground, the limb becomes so increased in bulk by the increase of blood in its veins, that the bandage acquires precisely the proper degree of tightness, and, no matter how active the exercise or labour of the patient, it will remain in position all day. The bandage is applied by winding one turn just above the malleoli, then one round the instep and sole, then up the leg, spirally, round and round, to the knee, each turn overlapping that below it, from one-half to three-quarters of an inch. If there be any redundant bandage, it can be wound round the leg below the knee, the tapes being carried in different directions and firmly tied. When the patient undresses at night, the bandage is to be removed, and the limb wiped dry. A piece of soft old linen moistened with olive-oil, or some equally simple dressing, should be laid on the ulcer and retained in place by a few turns of an ordinary roller. The bandage should be sponged with warm water, and hung over a line to dry, in readiness for the morning; or it can be wiped dry at once, and rolled up with the tapes in the centre. Such is the dressing for the night; in the morning the leg can be washed, but, whether it be washed or not, all traces of oil or cerate should be carefully wiped away, as contact with the bandage of any fatty matter would tend gradually to injure the rubber. This, Dr. Martin declares, is the whole treatment.

Dr. Martin has found his bandage very valuable in the treatment of synovitis, œdema, and anasarca of the leg, erysipelas, erythema, and other skin-diseases. He has treated seven cases of 'housemaid's knee' by thoroughly evacuating the bursa, and at once applying the bandage, which was kept on day and night for a month. No other treatment was used, and the results were in every case successful.

The genuine Dr. H. A. Martin's pure rubber bandages are stamped with his facsimile, and can be obtained from any chemist, or direct from Messrs. Krohne & Sesemann, 8 Duke Street, Manchester Square, W., London, his sole wholesale agents for Europe. ALBAN DORAN.

ARTICLE 4617.

A System of Obstetric Medicine and Surgery, Theoretical and Clinical, for the Student and Practitioner. By ROBERT BARNES, M.D., and FANCOURT BARNES, M.D. Vol. II. London: Smith, Elder, & Co. 1885.

TO those interested in the study of midwifery, the present volume will prove of great interest and exceeding value, embodying as it does the mature experience of one who has devoted a lifetime to the study of the subject, and who has already done more than any living author to place all that pertains to operative midwifery upon a sound scientific basis. In addition to this, the junior author gives us all the most recent operative procedures, and brings the work completely up to date.

Chapter I. treats of labour in all its details, from the causes producing it down to the management of the third stage of labour. The opinions of all the best known authorities as regards this latter are mentioned and briefly criticised. The authors give their reasons for objecting to the employment of ergot during the placental stage, as being likely to defeat the very object in view, by exciting irregular spasmodic or tetanoid contractions which lock up the placenta, and render all attempts at manual extraction abortive, even dangerous.

Chapter II. comprises the puerperal process, or the natural history of childbed. The conditions favouring and impeding involution are fully entered into, and the description will be read with much interest. Primary or immediate operation, where the perinæum is lacerated, carbolised gauze in place of diapers, and the employment of the binder, are recommended.

Chapter III. is devoted to the new-born infant, including practical hints on the choice of a wet nurse and the substitutes for breast-milk.

Chapter IV. enters into the factors of labour and describes fully the mechanism of labour, both in natural and in abnormal presentations. The various theories of Naegele and other obstetric writers are criticised in detail. The whole subject is treated in a most masterly and practical manner.

Chapters V. and VI. are devoted to the accidents during and following upon labour, including the hæmorrhages of gestation, accidental, and those dependent upon placenta prævia, as also *post partum* hæmorrhage; rupture and inversion of the uterus; and rupture of the perinæum.

Chapter VII. treats of sudden and quick death in gestation, labour, and puerpery, from thrombosis, embolism, apoplexy, shock, air in veins, &c.; it is a most interesting and instructive essay.

Chapter VIII. deals with the accidents of lactation.

Chapter IX. treats of the puerperal fevers. The various theories are reviewed in the following order. 1. That puerperal fever is a disease *sui generis*. 2. That it is a putrid fever due to absorption of foul matters from the uterus. 3. That it is the result of traumatism. 4. That it is a form of septicæmia. 5. That it is due to the invasion of the system by microscopic organisms.

It is impossible to give a brief abstract. Nowhere have we seen the question discussed in such a comprehensive and exhaustive manner.

Antiseptic midwifery here finds its proper place; a caution is wisely given as to the danger of dwelling overmuch upon this. The better and more comprehensive term is 'prophylactic.' So far as antiseptic appliances are concerned, they can strictly only be regarded as subsidiary means in the carrying out of the great principle that lies at the bottom of all good obstetric practice, namely, to screen the lying-in woman from those poisons and other noxious influences which threaten her from within and from without.

Chapter X. refers to the armamentarium obstetricum, in which we find figured and described the most recent additions in the form of Tarnier's basiotribe and Fancourt Barnes's axis traction cephalotribe, which is longer than any other English cephalotribe, and is easily adapted to the head above the brain, the perineal curve enabling the operator to seize the head in its transverse diameter, thus preventing the blades from slipping backwards during the crushing of the head.

Chapter XI. treats of dystocia, including the tumours that interfere with the course of labour, and faults in the long canal, such as rickety pelvis, kyphotic pelvis, osteomalacia, spondylolisthesis, and dystocia from the fœtus.

Chapter XII. is devoted to the forceps, the indications for its use, the modes of application, and the dangers to mother and child. It is essentially a practical essay upon the subject, copiously illustrated, and will be read with interest by every practitioner who is called upon to deal with the emergencies of actual practice.

Chapter XIII. describes the various methods of turning, from the simplest to the most difficult, where evisceration or decapitation is necessitated.

Chapter XIV. is devoted to embryotomy, the indications for, methods of operating, and the dangers attending it, these latter rising with the degree of distortion, the imperfection of the instruments, and the lack of skill of the operator.

Chapter XV. enters into the various operations comprised under Cæsarian section, including Porro's, and laparo-elytrotomy.

Chapter XVI. treats of the premature induction of labour, the indications for, and various methods of accomplishing it, not forgetting the ethical questions involved.

The work is replete with observations of great practical import, culled not only from the senior author's life-long experience, but also from extensive research in the literature of the subject. In place of finding the author's opinion dogmatically asserted and insisted upon, we find in addition the opinion of all the best-known obstetric writers, not only in this country but in France, Germany, Italy, and America. This, in our judgment, enhances the value of the work materially.

The work of the junior author is evident in many sections. All that pertains to modern improvements in operative midwifery, including antiseptics, is evidently his, and deserves special commendation. We know of no treatise upon midwifery which can be so thoroughly recommended, whether to the student or to the busy practitioner. It is profusely illustrated, and the way in which it has been turned out is a credit to its well-known publishers.

ARTHUR W. EDIS, M.D.

ARTICLE 4618.

Health-Resorts at Home and Abroad. By M. CHARTERIS, M.D. 12mo, pp. 156. London: J. & A. Churchill. 1885.

THE title of this work is a very wide one, but its subject-matter is chiefly mineral waters. Dr. Charteris has given us a few pleasant sketches of what he has seen at various baths, chiefly on the Continent; and we should be glad to have some more of them, especially if they treated, as his remarks on Tarasp, of some of the less familiarly known spas.

Dr. Charteris has conceived the idea of making his work more complete by adding a general list of health-resorts. This was scarcely needed; the number of such books, especially in Germany, is almost legion, and within the last two years we have had Professor Tichborne's and Dr. P. James's work, and the *Holiday Number* of the LONDON MEDICAL RECORD, not to mention Bradshaw's book on the subject.

A cursory glance seems to show that the list in the work now before us is hastily compiled. For instance, we observe two places set down, one as in Prussian, and one as in Austrian, Schleswig; Reichenhall is described as at an elevation of 4,400 feet, and Roisdorf of 1,000 feet. We agree in all the praise of Meran, but we never knew that it was counted among places of higher altitude. Hall, in Tyrol, is evidently confounded with the Hall famous for its goître water. Vals is only called saline; nothing is said of its alkaline water. Brückenau is declared to be a hot spring. Æsculap and Apollinaris are set down among health-resorts; why not Hunyadi Janos, or Giesshübel, and similar waters (Giesshübel, by the way, is a health-resort)? Nauheim is made only four miles and Soden two miles from Frankfort. We miss many names, such as Schintznach, Gurnigel, Stachelberg in Switzerland; Rippoldsau, Badenweiler, in the Black Forest. The French list is scanty, and Royat is not in it. In short, revision of the list is required. Some tables of the metrical system, and a list of preparations of the Austrian Pharmacopœia, are given for the benefit of physicians who may be going abroad.

The Health-Resort of Tarasp-Schuls. By J. PERNISCH, M.D. 12mo., pp. 83. Zurich: Orell-Fusseli & Co. 1885.

THIS is in every way an excellent guide-book.

J. MACPHERSON, M.D.

ARTICLE 4619.

Suicide. By W. WYNN WESTCOTT, M.B. London, 1885.

THIS treatise will fill a gap in English literature. Hitherto there has been no adequate work on the subject of suicide written in the English language at all comparable with the work of Morselli, or of any equivalent continental writer.

Dr. Westcott treats of his subject exhaustively from its ethical, historical, etymological, causative, climatological, statistical, juridical, and preventive points of view; and even the alleged suicide of animals is deemed worthy of a separate chapter. The extent of literature laid under contribution may be judged from the fact that the bibliographical appendix extends to four pages. The volume is both curious and instructive, and will form a welcome addition to the libraries of the medical jurist and the coroner.

The one thing that Dr. Westcott's work lacks, is a good arrangement of matter and condensation. The successive chapters are well enough arranged, but the author has a provoking way of skipping in his chapters from one topic to another in an inconsequential fashion, suggestive of the note-book rather than of the treatise.

THOMAS STEVENSON, M.D.

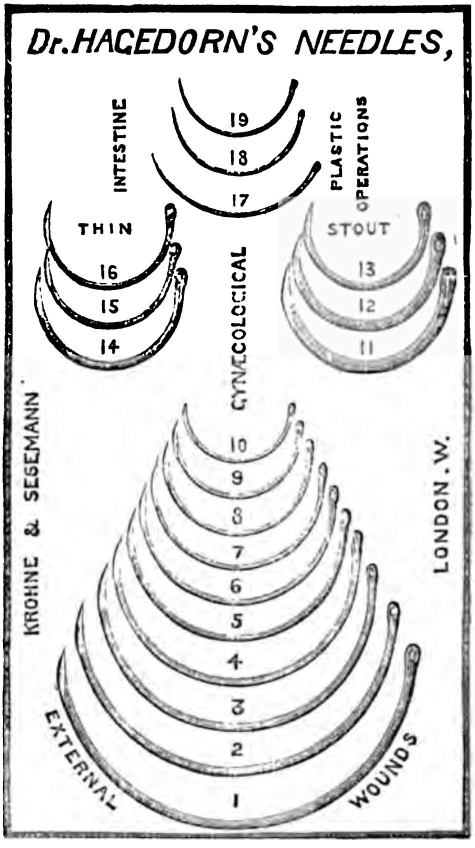
NEW INVENTIONS.

ARTICLE 4620.

DR. HAGEDORN'S NEEDLE AND NEEDLE-HOLDER.

DR. HAGEDORN, of Magdeburg, has recently invented an improved form of surgical needle. The kind of needle in general use has a stem, the section of which forms either a circle or an oval. It is flattened at the inner side of its curve, so as to form a broad double edge, which is transverse to the curve and terminates in a point. Hence, when used for the introduction of a suture by the side of a wound, it makes a puncture, or rather, a small vertical incision, parallel with the direction of the wound. On tying the suture, the inner margin of this incision is dragged inwards towards the wound, so that an elliptical, or even triangular gap, is formed at the site of the puncture, which may be slow to heal, and sometimes causes a small fistula. The point of the old kind of needle, flattened on its concave side, is weak and apt to deviate from its intended direction in tough or hardened tissues.

On the other hand, the stem of Dr. Hagedorn's needle forms an oblong parallelogram on section. It is of equal width and thickness throughout its entire length, and is curved on its axis, with its short cutting edge on its convex side near the point. This edge is about three times the width of the needle. The curve of the needle forms a semicircle.

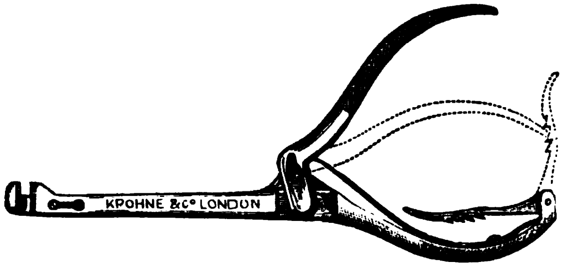


Being curved on the edge, this needle is more resistant than the older form, and the point follows, without deviation, the intended direction of the puncture. The eye perforates the flat side, so that it can be made larger and more tapering at the terminal end, in consequence of which even a stout double thread will pass without difficulty through the puncture. The needle is of equal thickness throughout, so that it can be firmly grasped by a holder at any point, whereby its direction will be much facilitated, without any fear that it may be broken. The cutting edge is on the convex side, and cannot be injured or blunted by the needle-holder, and may readily be resharpened. Owing to the form of the needle, the incision which it makes is not vertical, but horizontal, and, therefore, at a right angle to the edge of the wound, so that the two edges of the stitch-wound, on tying the suture, are drawn into close apposition. These needles cause less injury to the tissues than the older form, which is of high importance, especially in sutures of nerves and tendons.

As there are operations where a shallow-curved, or even a straight, needle is required, Messrs. Krohne & Sesemann, of Duke Street, Manchester Square, make five different forms (see fig. 1), of which they are ready to supply sample-cards containing graduated sizes, beginning at the largest, No. 1. In fig. 1, Nos. 6 and 10 (the smallest) are represented. Dr. Hagedorn has contrived a needle, with a round point, for intestinal sutures. The smaller sizes, with short cutting points, are well adapted for operations on the eye; and the above-named instrument makers also supply a stouter and a thinner form of needle, useful in plastic operations on the female organs.

Dr. Hagedorn has also invented a needle-holder, which can grasp the needle firmly without any risk of breaking it. The needle can be seized or disengaged with equal readiness; and its point, after having passed through the tissues, can be taken hold of without injury to itself or to the surrounding soft parts, being guarded by the jaws of the needle-holder.

The needle-holder (fig. 2) consists of a steel rod, ending in a handle, upon which a similar shorter rod is made to glide up and down. Both rods form, at a right angle to their anterior termination, the jaw, which is lined with copper. The up and down movement of the rods is effected by a lever-handle, held in position by a movable screw. A ratchet on the lower part of the handle serves for fixing the needle. The first tooth on the ratchet will fix a stout needle, the second and the following third tooth finer needles. A slight pressure with the little finger on the ratchet will easily release the stop, and set the needle free. In using it, the needle-holder is held in such a position that the little finger is near the ratchet, ready for releasing its hold by slightly pressing against it. Care must be taken that the needle is placed in the longest diameter of the jaw, with the inner curve close to the stem of the fixed rod. Only when the needle has been grasped in this manner will its perfectly firm position be secured. This needle-holder, which takes up but little room, will, after a little practice, be managed with the greatest facility. It is made of several sizes and strengths, to meet the various requirements. Two kinds are especially made for gynæcologists, one with a rectangular, and another with an oblique jaw.



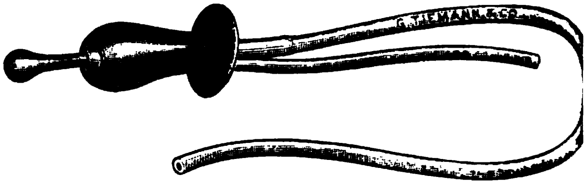
Dr. Hagedorn's needle and holder have been employed for plastic and abdominal operations at the Samaritan Free Hospital, by Drs. Bantock and Percy Boulton, with the most satisfactory results. Professors Bardeleben, Fritsch, Olshausen, and other continental authorities, have spoken and written in high favour of these new contrivances. Easy introduction and extraction of the needle during the application of sutures, and the least possible amount of damage to tissues, are matters of the greatest importance in plastic operations. Dr. Hagedorn's needles and needle-holder must, therefore, be considered to be valuable inventions, since they fulfil all these requirements.

Article 4621.

A VAGINAL DOUCHE.

This vaginal douche, the invention of Dr. L. A. Frost, of Jacksonville, Illinois, is intended to be a convenient and efficient instrument for administering the prolonged hot-water douche as recommended by Dr. T. A. Emmet, of New York.

It will be seen to consist of two portions; the nozzle, joined to a rubber tube, which passes through the shield portion, and through which the injection is to flow; also a bulbous part, which is introduced into the vagina as far as the rim will allow, and which by its shape is calculated to be self-retaining, and also to act as a plug so as to cause the vagina to be filled with water.



As soon as the vagina is filled, the surplus passes off easily through the hollow bulb, and out through the rubber overflow-tube, into a receptacle placed beside the bed for its reception.

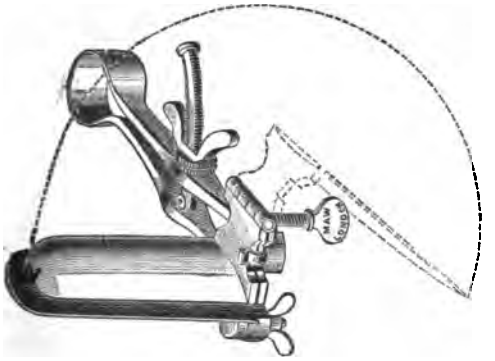
A large pitcher being on a stand at the bedside, filled with water at the proper temperature (say 110° F.), and a Davidson's syringe tied to the handle of the pitcher so as to prevent its slipping out, the nozzle of the syringe is introduced into the short tube, and the stream started; at which time the instrument, previously oiled, is to be introduced into the vagina. It can be used by the patient without an assistant, if she so desire. As the bulbous portion plugs the vagina efficiently, it can be used without danger of wetting the bed. It will be found to be equally convenient with the patient lying either in the knee-chest position, or upon the back.

Article 4622.

OPERATION SPECULUM.

The woodcut represents an instrument, invented by Dr. Alexander Duke, obstetric physician to Dr. Steevens' Hospital, Dublin, designed for use in operations on the vaginal walls, and on the os and cervix uteri. It is the only bivalve speculum with which we are acquainted which will give as much room at the vaginal outlet as at the vaginal roof, and allow the operator to both touch and see the os and cervix.

The blades being arranged at right angles with the handle (which opens by spring action released by screw), the exact amount of expansion necessary to expose the os and cervix can be attained without pain to the patient, the blades lying parallel in the passage, one of which can be made to divaricate so as to compensate for the pressure of the vaginal walls above, and, if necessary, stretch the vaginal roof to its full extent and give an insight into the os itself. The divaricating blade makes the instrument self-retaining; and as both blades rotate it can be introduced and fixed in any position in the vagina, either antero-posteriorly or laterally. For portability of carriage, one blade can be removed and the other folded over a handle, so that a small box will contain all.



The makers are Messrs. S. Maw, Son, & Thompson, of Aldersgate Street, London.

Article 4623.

A NEW MATERIAL FOR SURGICAL BELTS AND KINDRED APPLIANCES.

Mr. Jackson, manager of the outfitting department at the Army and Navy Stores, Victoria Street, Westminster, has sent us for examination several articles of the above-named character made of a new material, the basis of which is cork. Mr. Jackson, with a praiseworthy zeal that cannot be too highly commended, has for some years past been engaged in endeavouring to perfect a material from which clothing of ordinary cut and appearance could be made for both sexes that should be sufficient in itself to float them in the water in case of shipwreck or boating accidents, and he is now exhibiting garments manufactured of it at the Inventions Exhibition, and several crucial trials have been made of them both in the sea and in rivers with the most satisfactory results. The surgical belts are an outcome of the same idea to this extent, that cork being a non-conductor, it is better adapted to a variety of purposes than when the appliances are made exclusively of silk or woollen warps. The mode adopted in the new material is to cut cork into very thin shreds, so thin that the flexibility of the material when fully manufactured into a cloth is not affected. These shreds are in the first place woven over with a silk or woollen warp (for the purposes in question silk is employed) and each shred or strand is then worked into a complete cloth, having the same appearance as corded silk. The specimens sent us are beautifully made, are not thicker than an ordinary made appliance and quite as flexible. They consist of a choleraic or abdominal belt lined with red flannel, a chest protector of similar make, a guard for the back of the head and neck to place over the head covering to counteract the sun's rays, and a strip to lay the length of the back as a spine protector against sunstroke. The idea of the inventor appears to be a correct one. For such purposes it would be perhaps difficult to find a material save cork (if we are to leave the ordinary beaten tracks at all) so suitable. It is light, flexible, admits of free ventilation, and as a non-conductor acts in a twofold capacity according to the purpose for which it is used. We see no objection to the use of the material for the various appliances to which the surgeon has to have recourse; on the contrary, we think it is a 'new departure' that may be considered with advantage by the profession. At the present moment application must be made to Mr. Jackson who is the holder of the patent for the manufacture of the cloth, but we presume he will relegate his rights to different makers under royalty to manufacture the different articles.

Article 4624.

DR. D'ARENT'S OPHTHALMOSCOPE WITH CYLINDRICAL LENS.

Dr. D'Arent's instrument is a modification of other ophthalmoscopes. It consists, like all such instruments, of three superposed discs, the first for the spherical concave lens, the second for the spherical convex lens, the third for the cylindrical lens; this last disc can be placed in any direction, the axe of the cylinders can describe a complete circle. It differs from other similar instruments by being lighter; all the lenses measure seven millimètres in diameter. The first disc contains spherical concave lens 1, 2, 3, 4, 5, 6, 7, 8, 9 dioptrics, and the convex spherical lens 10 dioptrics, which combine with the convex lens of the second disc. The second disc contains spherical convex lens 1, 2, 3, 4, 5, 6, 7, 8, 10 dioptrics, and the spherical concave lens; 10 dioptrics, which combine with the concave glasses of the first disc. The excursion of the instrument is from + 20 D and from − 20 D. The third disc contains cylindrical concave glasses 1, 2, 3, 4, 5, 6, and 7 dioptrics. There is in the case a lens, 15 D, and a minor with a 25 centimètre focus for examining reversed images. For examining direct images there are two small mirrors on an incline, one flat and the other concave, with a focus of eight centimètres.

Article 4625.

A NEW ENDOSCOPE.

M. Boisseau de Rocher has invented an instrument which he calls a megaloscope or endoscope, for the purpose of examining the stomach, the bladder, and rectum. It is constructed on a new optical principle, and exposes to view a considerable internal area of these organs. It has a circumference of 20 centimètres in diameter. The lesions exposed to view are studied under a strong magnifying power. The objective lens presents an image of the mucous surface, which is magnified by the megaloscopic ocular lens. One of a still higher magnifying power can be substituted. The image is easily focussed, because the primary one, of reduced proportions, scarcely shifts its place; the eye alone, without touching the instrument, succeeds in doing so. Thus different planes of the mucous membrane are clearly observed, or, in other words, the entire cavity can be studied, whether it be the rectum, bladder, or stomach. The electric lantern used for lighting is fed by a pile presented recently to the Académie de Médecine by M. Boisseau de Rocher as one especially fitted for galvano-cautery.

Article 4626.

A PRESSURE-APPARATUS.

M. Cailletet has submitted to the Académie des Sciences an apparatus constructed on the principle of those which were invented for his researches on the liquefaction of gases. It has been modified by Dr. Regnard, of the Sorbonne, who used it in his experiments undertaken to determine the effect of high pressure on inferior organisms. The organisms are placed in a glass tube, and all the phenomena that take place in it can be studied from the moment the organisms are immersed until the pressure reaches 500, 1,000, and even 1,200 atmospheres, being equal to the pressure existing in ocean depths.

Article 4627.

A LARYNGO-PHANTOM.

Dr. Baratoux has invented an instrument he calls a laryngo-phantome; it is constructed for the purpose of teaching medical men how to pass the bucco-pharyngeal passage without touching its walls, how to introduce an instrument into any given region of the larynx, also how to remove a tumour or foreign body from the larynx. The instrument consists of a metallic tube similar to that of Dr. Labus's laryngo-phantome. It represents as nearly as possible the length and direction of the human bucco-pharyngeal canal. An artificial plaster-larynx is placed at its inferior extremity, which closely resembles the living organ both in position and in conformation. Separate metallic tubes pass along the larynx below; they traverse the larynx, and terminate on its anterior wall, when they are joined by wires carrying a numbered plate, which corresponds to a certain region marked on the larynx. The upper extremities of the wires terminate on different parts of the laryngeal mucous membrane. Small wax or metal balls can be fixed on to the ends of the tubes, and placed to imitate tumours of different dimensions. The instrument rests on a pedestal, which is placed on a box divided into three compartments. The centre compartment contains two of Gaiffe's elements. In the left-hand compartment an electric bell is placed; in the right, a sheep bell. The walls of the larynx are by means of a wire in communication with the sheep bell and with a pole of the pile. Each of the different parts of the larynx is also in connection, by means of a wire, with the electric bell and with a pole of the pile. In order to use the instrument, either for examining the artificial larynx or for removing the artificial tumours previously placed in the positions preferred, the glass of the instrument is connected with the other pole of the pile, so that the sheep bell rings when the walls of the buccal cavity are touched, and the electric bell when the artificial tumours are seized.

Medical Inspection of Schools.—Dr. Chautemps, at a recent meeting of the Conseil Municipal of Paris, proposed that private schools should be under medical supervision of the inspectors of commercial schools. These latter are kept in a healthy condition, but private schools are frequently hot-beds of infection and asylums for dirt. It frequently happens that children recovering from infectious diseases or infested with parasites are sent to private schools because there is no troublesome medical inspector to send them back to their parents.

MISCELLANY.

M. Gellette overcomes the odour of iodoform by mixing it with charcoal and sulphate of quinine in the following proportions:—Iodoform, 100 grammes; sulphate of quinine, 1 gramme; charcoal, 3 grammes.

Ancient Anæsthetics.—M. Haureau, at a meeting of the *Académie des Inscriptions*, read a paper on the anæsthetics used in surgery among the ancients and during the Middle Ages. In a manuscript recently discovered, Abelard attributes the deep sleep which fell on Adam when he was robbed of a rib to the effect of anæsthetics similar to those now used. M. Dagneau, in his studies to discover what were the anæsthetics in the twelfth century, has observed that passages from Pliny, Dioscorides, de Hugues, de Lucques, and others, bear evidence that in ancient times and the Middle Ages there were three kinds of anæsthetics employed by surgeons. One kind was applied locally, others administered internally or inhaled. Mandragora and opium were administered as potions previously to operations; others of a more complex kind were used for inhalation. Non-volatile vegetable substances entered into their composition, which suggests that they were not very efficacious.

Hunter on Lancing the Gums.—In the *Brit. Med. Jour.*, Jan. 1885, p. 210, the following remarks are quoted from John Hunter. 'Teething is productive of local and constitutional complaints, with local sympathy. The local symptoms are inflammation, heat, and swelling of the gums, and an increased flow of saliva. The constitutional, or general consequential symptoms, are fever and universal convulsion, attended by diarrhœa, costiveness, loss of appetite, eruptions on the skin, especially on the face and scalp; cough, shortness of breath, with a kind of convulsed respiration; spasms of particular parts; an increased secretion of urine, and sometimes a diminution of that secretion, with a discharge of matter.' He then adds that the only method of cure is to cut the gums down to the teeth.

Borax as an Internal Disinfectant.—In the *Union Médicale*, Dr. Cyon confirms the statement made by Dumas in 1878, that borax is possessed of most valuable antiseptic powers. Independently of its value for the preservation of food, it is a great preventive of infectious diseases, and may be employed internally to ward off epidemics. It may be taken for months or years with impunity, and constitutes a valuable prophylactic. Dr. Cyon states that it is a remarkable fact that in all epidemics of cholera the workmen in boracic acid factories have always escaped the disease. The usual dose is five or six grammes (75 to 90 grains) daily, taken for an indefinite time.

Insanity in the United States.—Statistics recently issued show that in 1865 the number of insane persons in the United States was only 24,042. Five years later it had reached 37,432, and by 1880 treatment was required for 91,959 lunatics. The increase in insanity during the ten years from 1870 to 1880 was nearly 150 per cent., while that of the total population was only about 26 per cent. But these figures do not represent the actual increase, as during the above period a large number of insane persons previously concealed were brought into public notice by more thorough investigation. Apart from several large county asylums in the United States, there are 80 State and 40 private institutions for the care of the insane, with a proper capacity for about 40,000, but containing 53,192, thus leaving some 45,000 lunatics to be cared for elsewhere. The proportion of insane is greatest in New England, but the increase has been most rapid in the Western States. In the State of New York there are 35 institutions for the care of these unfortunate people, accommodating 11,343 patients, while it is said that there are 4,000 provided for at home.

THE STUDENTS' NUMBER

OF

THE LONDON MEDICAL RECORD

WILL BE PUBLISHED

On the 15th SEPTEMBER, 1885,

ON which occasion the special and interesting features that have made this number of the MEDICAL RECORD so popular for many years past, will again be adopted.

It is desired to make the Annual Students' Numbers valuable by reason of the practical and useful information to be derived from them by all Students and Practitioners; it is hoped that, with this view, Manufacturers, Publishers, and others will promptly forward descriptions of new articles, Surgical Instruments, Microscopes, and other appliances, and when sent for inspection will be returned when noticed. By this means a fairly representative view of various classes of appliances will be placed before the profession, to the evident interest of the houses contributing information.

As this portion is published for the benefit of Business Houses, it is earnestly requested that the desired information may be sent as promptly as possible.

No charge is made for inserting these particulars, but the advantage of advertising at full length, and, where necessary, of illustrating announcements by wood-blocks, need scarcely be pointed out. Reference will be made in the Editorial part of the publication to the Advertisement where necessary.

Energetic means will again be taken to bring this **Special Students' Number** of the LONDON MEDICAL RECORD under the notice of Students of Medicine, and of Natural Science and Pharmacy, in Great Britain and Ireland, as well as of the Lecturers at the various schools. A **Liberal Supply** of copies will be furnished to **all the Reading Rooms** and **Libraries** of **Medical Schools**; to the **Lecturers'** and **Deans' Rooms**; and to **Medical** and other **Libraries**; a copy will also be **forwarded free,** on application, to **every Student of Medicine, Pharmacy, or Natural Sciences.**

Each Advertisement will be referred to in the *Classified Index* to the *Students' Number*, and will, moreover, appear in the *General Index to Advertisements* in the December 1885 issue. **A Permanent reference** will thus be given, a feature of undoubted value, and one not afforded by any other publication.

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The London
Medical Record

A MONTHLY REVIEW OF THE

Progress of the Medical Sciences and of Subjects relating to Public Health

EDITED BY ERNEST HART

[Educational Number]

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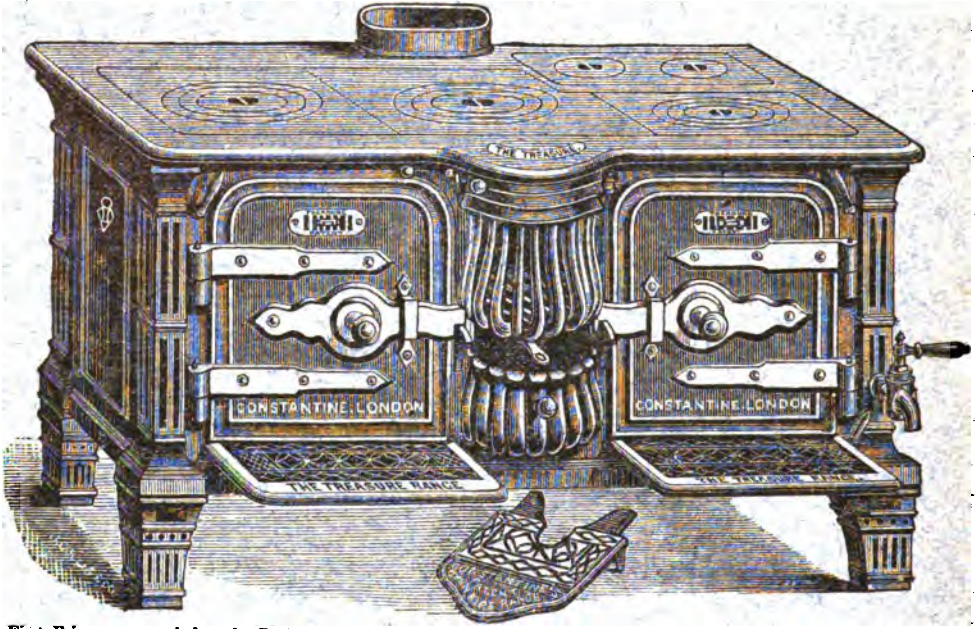

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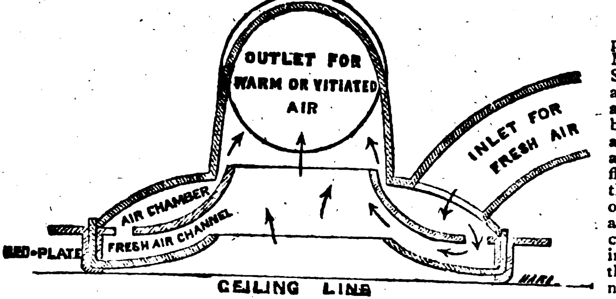

Extract from the Times, *March* 14, 1885, *page* 7.

Ventilation without Draught.—This desideratum appears to be accomplished by a syphonic system devised by Mr. Frederick H. Smith, at whose offices, 52 Queen Victoria Street, London, we recently inspected the arrangement. The air supply is conducted into the apartment from the external atmosphere by means of air ducts, which terminate in distributing passages at the floor level. The exit for the vitiated air is placed in the ceiling, and consists of two tubes, a large and a small one, running parallel to each other between the floor joists in the case of rooms having others over them. In the case of rooms on top floors, or those having the roof directly over the ceiling, the tubes are placed concentrically, but the action and results are the same. The larger of the two tubes carries off the vitiated air, while the smaller one forms an induction tube for cold air, its outer extremity being open to the atmosphere. These two Tubes, or conduits, are so connected that the passage of the heated air through the larger tube induces a current of cold air through the smaller one, in a continuous stream. The result is a rapid clearing away of all deleterious gases and products of combustion as they accumulate, and the preservation of a pure atmosphere, at an equable temperature, in the apartment. In a small room at Mr. Smith's offices, in which five large gas jets were burning, the atmosphere was apparently quite innoxious at the level of about 7 ft., the temperature being about 60 deg. Fahr. At a higher level, however, and especially near to the ceiling, the temperature was high, and the air greatly vitiated. It was demonstrated that this vitiated air was being drawn off through the exit tube, which acted as a powerful sucker. After turning off the gas burners, and upon the temperature of the room generally becoming lowered and equalised, a feeble upward action was still maintained in the upcast tube, but there was no down draught whatever. The system has already been applied to a church and other buildings with acknowledged success.

Extract from the Annual Report of the 'French Hospital and Dispensary,' issued 29th January, 1885.

We have also to return our best thanks to Mr. Smith, who undertook gratuitously to repaint one of our wards and to apply a new system of ventilation of his own invention, which was very successful.

Letter from David Urquhart, Assistant Engineer to Colonel Sir Francis Bolton, C.E.

F. H. Smith, Esq., 52 Queen Victoria Street, E.C.
4 The Sanctuary, S.W., London November 22nd, 1884.

In reply to your inquiry, I have much pleasure in certifying that your system of ventilation as applied to the 'Island Room' of the illuminated fountains at the Health Exhibition reduced the temperature during the displays from about 110 degs. to about 70 degs., and thus enabled the men to perform their duties without inconvenience.—Yours faithfully,
DAVID URQUHART.

The London Medical Record.

GREAT BRITAIN AND IRELAND.

MEDICAL QUALIFICATIONS.

THE number of examining bodies in the United Kingdom which grant degrees and diplomas is twenty. The qualifications obtainable from them are as follows.

1. *Royal College of Physicians of London:* Diplomas of Licentiate, Member, and Fellow.
2. *Royal College of Surgeons of England:* Diplomas of Member and Fellow.
3. *Apothecaries' Society of London:* Licence.
4. *University of Oxford:* Degrees of Bachelor of Medicine and Doctor of Medicine.
5. *University of Cambridge:* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.
6. *University of London:* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
7. *University of Durham:* Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, and Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
8. *Victoria University, Manchester:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master of Surgery.
9. *Royal College of Physicians of Edinburgh:* Diplomas of Licentiate, Member, and Fellow.
10. *Royal College of Surgeons of Edinburgh:* Diplomas of Licentiate and Fellow.
11. *Faculty of Physicians and Surgeons of Glasgow:* Diplomas of Licentiate and Fellow.
12. *University of Aberdeen:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
13. *University of Edinburgh:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
14. *University of Glasgow:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
15. *University of St. Andrew's:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
16. *King and Queen's College of Physicians in Ireland:* Diplomas of Member, Licentiate, and Fellow, and Licentiate in Midwifery.
17. *Royal College of Surgeons of Ireland:* Diplomas of Licentiate and Fellow; and Diploma in Midwifery.
18. *Apothecaries' Hall of Ireland:* Licence.
19. *University of Dublin:* Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
20. *Royal University in Ireland:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery; and a Special Diploma in Obstetrics.

The Royal College of Physicians of London and the Royal College of Surgeons of England have instituted a conjoint examination for the conferring of the licence of the former and the membership of the latter body.

The Royal College of Physicians and Surgeons in Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow, have also instituted a conjoint examination for the conferring of licences.

In addition, the Royal Colleges of Surgeons and the Faculty of Physicians and Surgeons of Glasgow grant licences in Dental Surgery, which are registrable under the Dentists' Act.

Certificates and diplomas in State Medicine and Public Health (which at present are not registrable) are conferred after examination by the Universities of Cambridge, London, Durham, Edinburgh, Glasgow, and Dublin; by the Royal University of Ireland; by the Royal Colleges of Physicians in London and Edinburgh; by the Faculty of Physicians and Surgeons of Glasgow; and by the King and Queen's College of Physicians in Ireland.

The following is a general summary of the conditions required on the part of candidates for examination; but, for further details, our readers must consult the regulations issued in the Student's numbers of our contemporaries; or apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognised:—1. The possession of a degree in Arts of an University of the United Kingdom or of the Colonies, or of some University recognised by the Medical Council; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the 'Recommendations of the General Medical Council.' No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the following subjects of general education: 1. English Language, including Grammar and Composition; 2. Latin, including Grammar, Translation from specified authors, and Translations of easy passages not taken from such authors; 3. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first book of Euclid, with easy questions on the subject-matter of the same; 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics; 5. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) Any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Zoology; (*i*) Elementary Chemistry. The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Forms for registration are supplied by the licensing bodies and at the schools and hospitals.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the licensing body with which he intends to become connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As the pupil, for one year, of a legally qualified surgeon holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities; 3. By entering at once at a recognised medical school.

The course of professional study must occupy four years, of which at least three winter and two summer sessions must be passed at a recognised medical school. For the degrees of the Universities (except that of London and the Royal University in Ireland) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a college in connection therewith.

To obtain a degree, diploma, or licence, two examinations at least in professional subjects must be passed. These must include the following subjects: Chemistry (including the rudiments of the principles of the science and the details which bear on the study of Medicine, Light, Heat, and Electricity); Anatomy; Physiology; Materia Medica and Pharmacy; Pathology; Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics); Surgery (including Surgical Anatomy and Clinical Surgery); Midwifery (including Diseases peculiar to Women and to New-Born children); Theory and Practice of Vaccination; Forensic Medicine; Hygiene; and Mental Diseases.

Special arrangements exist at the Universities of Durham and St. Andrew's for granting degrees to practitioners of medicine above forty years of age.

INSTRUCTION IN THE MEDICAL SCHOOLS.

THE medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, the Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, Mr. Thomas Cooke's School of Anatomy and Surgery, and the West London Hospital Preparatory School of Medicine.

In the provinces in England there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the Medical College of the University of Durham, at Newcastle-on-Tyne; the Medical School affiliated to University College, Bristol; the Medical Faculty of University College, Liverpool (Royal Infirmary School of Medicine); the medical school in connection with the Yorkshire College at Leeds, and that attached to the Firth College in Sheffield. The Universities of Oxford and Cambridge do not profess to give a complete education, but instruction in many branches is provided for at Cambridge.

In Scotland, the medical schools in which a complete course of professional education is given are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow; the Extra-academical School in Edinburgh; and Anderson's College, the Royal Infirmary School of Medicine, and the Western School of Medicine, in Glasgow.

In Ireland, the chief medical schools are, the School of Physic in Ireland, the School of the Royal College of Surgeons of Ireland, and the Queen's Colleges at Belfast, Cork, and Galway. There are also several medical schools in Dublin: viz., the Carmichael College of Medicine and Surgery, the Catholic University, and the Ledwich School of Anatomy, Medicine, and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses. We shall, however, endeavour to classify a part of the information therein contained under certain heads, viz., Clinical Instruction; Practical Surgery; Special Departments; Practical Physiology; Hospital Appointments; Tutorial Instruction; and Scholarships, Exhibitions, and Prizes.

CLINICAL INSTRUCTION.—At all the hospitals connected with medical schools, the physicians and surgeons deliver at stated intervals lectures on the cases under their care, in addition to making comments during their visits to the wards or in the operating theatre. In some instances, special provision is also made by the appointment of one or more of the hospital staff as clinical professors or lecturers; and in several of the hospitals a certain number of beds are specially devoted to the purpose of clinical instruction. At Guy's Hospital, forty patients are set aside in the medical wards, and are visited and their cases lectured on by the physicians in the winter, and by the assistant-physicians in the summer session: the surgeons also select cases for clinical instruction. A similar arrangement exists at the London Hospital, where two wards are devoted to the express purpose of teaching clinical medicine; the cases being lectured on by the physicians in the winter, and by the physicians or assistant-physicians in the summer. Special clinical professorships in medicine and surgery, in addition to the ordinary clinical lectures given by the physicians and surgeons, exist at the King's and University College Hospitals. In the former, the professor of clinical medicine is Dr. George Johnson; and the professors of clinical surgery are Mr. John Wood and Sir Joseph Lister. In University College Hospital there are two special chairs, known as the 'Holme Professorships' of Clinical Medicine and Surgery. The Holme professor of clinical medicine is Dr. Wilson Fox, who delivers clinical lectures, on Tuesdays and Thursdays, on the significance of the general signs of disease, and on the special modes of examination, diagnosis, and treatment of individual diseases. There are also two assistant teachers of clinical medicine, Dr. Gowers and Dr. Barlow, who hold classes for instruction in physical examination, the investigation of diseases of the circulatory, respiratory, and nervous systems, the examination of the urine, &c. The Holme professor of clinical surgery, Mr. Christopher Heath, gives a clinical lecture once a week, and also holds a weekly clinical examination on surgical cases in the operating theatre; these examinations, while open to the whole class, being specially intended for the instruction of the senior students. Mr. A. E. Barker and Mr. Godlee are assistant-professors of clinical surgery. A special course of lectures on clinical surgery is given in St. Thomas's Hospital, the lecturer being Mr. John Croft. In Cambridge, clinical instruction in medicine and surgery is given at Addenbrooke's Hospital throughout the year. At Leeds, clinical classes meet at appointed hours to receive instruction in the wards from the physicians, and special courses of clinical lectures are given by Dr. Clifford Allbutt, consulting physician, and Mr. Wheelhouse and Mr. Pridgin Teale, consulting Surgeons to the Infirmary. In the Liverpool Royal Infirmary, Dr. Glynn (one of the physicians) gives, once a week during the winter, practical instruction in clinical medicine and the methods of physical diagnosis. Two clinical tutors, in the Medical and Surgical Wards, are also appointed. A medical and a surgical clinical lecture are given every week in the Manchester Royal Infirmary. Elementary and Advanced Clinical Classes are formed by the members of the Infirmary staff at each of the trimestral periods, commencing with October, January, and May. Advanced Classes in Clinical, Medical, and Surgery are held for students in the last two years of their attendance at the Infirmary. In the Infirmaries of Aberdeen, Edinburgh, and Glasgow, clinical lectures on medicine, surgery, and midwifery are delivered by the medical staff of each institution. The Universities of Edinburgh and Glasgow have special professors of Clinical Medicine and Surgery. In the medical schools of Ireland, clinical courses are given through the session.

In connection with the subject of Clinical Instruction, reference must be made to means provided at several hospitals for the special purpose of training the students in the observation of cases. At the Charing Cross Hospital, a course of practical medicine is given by Dr. F. Willcocks and Dr. H. M. Murray. It includes the methods of examining organs, the examination of morbid products, case-taking, &c. At St. George's Hospital a similar course is given by Dr. Whipham; at Guy's Hospital by Dr. G. N. Pitt; and at the Middlesex Hospital, by Dr. Coupland and Dr. Douglas Powell. At several of the medical schools there are medical tutors, who instruct the students in the physical examination and systematic description of cases. The provision made at University College Hospital has been referred to above. Classes for medical demonstration are held in the Manchester Royal Infirmary twice weekly during the summer by two of the medical officers; in which classes instruction is given in anatomy as applied to medicine, in physical and chemical examination, &c. In the University of Edinburgh, a class for instruction in clinical medicine is held in the wards of the Royal Infirmary by the clinical tutor.

Practical Surgery.—At most of the schools, special provision is made for instruction in this important branch of medical education. The courses embrace such subjects as the application of anatomy to surgery on the living person or the dead body; the methods of proceeding, and the manipulations necessary, in order to detect the effects of diseases and accidents; the performance of operations on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated by preparations and recent specimens. The course of practical instruction is generally distinct from that of systematic surgery, and is in several instances given in the summer session. In the Liverpool School of Medicine, the lectures on Systematic Surgery are given thrice weekly, and there is a concurrent course of Practical Surgery twice weekly; besides which, a course of Operative Surgery is given in the summer.

Special Departments.—Due provision is made for both theoretical and practical instruction in *Midwifery and Diseases of Women*, so as to enable students to meet the requirements of the examining bodies.

Ophthalmic Surgery is taught by lectures and observation of cases at all the London schools; each hospital receiving ophthalmic patients except the Charing Cross, the pupils of which are admitted to the practice of the Royal Westminster Ophthalmic Hospital. As far as can be gathered from the prospectuses, the material available for the practical teaching of this subject (as far as regards in-patients) is as follows: St. Bartholomew's Hospital, 26 beds; Charing Cross (Royal Westminster Ophthalmic Hospital), 50 beds; Guy's Hospital, 50 beds (also about 3,000 out-patients); London Hospital, 12 beds. The other hospitals have beds for ophthalmic cases, but the number is not stated. Provision for teaching ophthalmic surgery, theoretical and practical, is made in the provincial schools. In the Universities of Aberdeen, Edinburgh, and Glasgow, instruction in ophthalmic surgery is given; and the students are admitted to see the practice of ophthalmic institutions in those cities. In the Extra-academical School of Edinburgh, and in the Schools of Medicine in Glasgow, courses of lectures on the subject are given. In Ireland, provision is made for the teaching of ophthalmic surgery in most of the medical schools.

Aural Surgery is taught as a special branch at all the London medical schools, and at the Leeds School of Medicine and the Bristol, Manchester, and Newcastle Royal Infirmaries among the provincial schools; also in the Extra-academical School in Edinburgh, and in Anderson's College and the Royal Infirmary School of Medicine in Glasgow.

Diseases of the Throat.—Special instruction in the diagnosis and treatment of diseases of the throat and larynx, and the use of the laryngoscope, is given at St. Bartholomew's Hospital by Mr. Butlin; at King's College Hospital by Mr. Rose; at the London Hospital by Dr. Morell Mackenzie, who delivers a course of lectures on the subject; at St. Mary's Hospital by Mr. Norton; at the Middlesex Hospital by Mr. Hensman (with Diseases of the Ear); at St. Thomas's Hospital by Dr. Semon; at University College Hospital by Dr. Poore; at the Westminster Hospital by Dr. De Havilland Hall; at the Bristol Royal Infirmary by Mr. Harsant; at the Manchester Royal Infirmary by Dr. H. Simpson; at the Newcastle-on-Tyne Infirmary by Dr. Hume (with Diseases of the Ear); in the Edinburgh Royal Infirmary by Dr. McBride (with Diseases of the Ear); and in the Glasgow Royal Infirmary by Dr. Newman.

Diseases of the Skin.—For the teaching of this important department of medicine, special provision is made in all the London Hospitals, in the Bristol General Hospital, in the Manchester Royal Infirmary, and in the Newcastle-on-Tyne Infirmary. Demonstrations of cases, and clinical lectures, are given at stated intervals, generally once a week. In University College Hospital, Dr. Radcliffe Crocker, the physician in this department, gives clinical lectures on diseases of the skin once a fortnight. A course of lectures is given in the Edinburgh Extra-academical School. In Dublin, a course of instruction on diseases of the skin is given at the Adelaide Hospital.

Orthopædic Surgery is taught at St. Bartholomew's Hospital by Mr. Walsham; and at the Westminster Hospital by Mr. Richard Davy.

Mental Diseases.—Lectures on Psychological Medicine are delivered as a separate course in most of the London schools. Special arrangements for clinical instruction are made in several instances; thus the students of St. Bartholomew's Hospital have access to a large public asylum; those of Guy's Hospital are admitted to Bethlem Hospital, those of the London Hospital to Bethnal House, and those of the Middlesex Hospital to the Leavesden Asylum. Two students of the London Schools, qualified to practise, are appointed for six months as resident clinical assistants in Bethlem Hospital. At Cambridge, clinical instruction is given at the county asylum at Fulbourn. At the Leeds School of Medicine, the students attend the West Riding Lunatic Asylum at Wakefield, where Mr. Bevan Lewis, the Medical Director, gives clinical lectures in addition to a course of systematic lectures at the school. In Manchester, a course of clinical lectures on mental diseases is given to senior students of Owens College by Mr. G. W. Mould, at the Asylum in Cheadle. At the Newcastle-on-Tyne College, instruction in psychological medicine is given by Mr. Wickham, medical superintendent of Coxlodge Asylum. In the University of Edinburgh, Dr. Clouston gives a course of Medical Psychology and Mental Diseases, with practical instruction at the Morningside Asylum. In the Extra-academical School, a similar course is delivered by Dr. Batty Tuke. In the Glasgow Royal Infirmary School of Medicine, a course of lectures on Mental Diseases is given by Dr. A. Robertson, in the City Parochial Asylum. In Dublin, special courses of lectures on mental diseases are given in the Richmond, Whitworth, and Hardwicke Hospitals, adjoining which is a large asylum containing over 1,000 patients. The lectures on psychological medicine are mostly delivered during the summer session.

Public Health.—Special courses of lectures on this subject are given at St. Bartholomew's, Charing Cross, Guy's, the Middlesex and St. Thomas's Hospitals, and at King's and University Colleges. At St. George's Hospital it is included in the course of Medicine; and at the London, St. Mary's, and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food, is given in the hygienic laboratory. In several of the provincial schools, the subject is included in the lectures on Forensic Medicine. In Owens College, Manchester, lectures on hygiene are delivered by Dr. Ransome; in the Bristol Medical School by Mr. Davies; in the Newcastle College of Medicine by Dr. Armstrong; and in the Sheffield Medical School by Dr. Drew. In Scotland, also, the instruction in Public Health is given in connection with the lectures on Medical Jurisprudence. In Dublin there is a professorship of Hygiene in the school of the Royal College of Surgeons. In London, instruction in Sanitary Science is also given in the Parkes Museum of Hygiene, Margaret Street.

PRACTICAL PHYSIOLOGY AND HISTOLOGY.—This subject is taught in all the schools: but more elaborate provision is made in some cases than in others.

At *St. Bartholomew's Hospital*, the course is conducted by a demonstrator and two assistant demonstrators, under the superintendence of the lecturers on Physiology and Chemistry.

At *Guy's Hospital*, Dr. Wooldridge gives a course of Histological demonstrations of the elementary tissues and the chief organs of the body, with their behaviour and re-agents, as studied with the microscope. The course is gone through during the summer session. A laboratory class in Practical Physiology, intended for advanced students, is also held by Dr. Wooldridge. It comprises Physiological Chemistry, Experimental Physiology, and advanced Histology and Embryology.

At *University College*, an elaborate course of instruction in Practical Physiology is given by Mr. Schäfer (Jodrell Professor of Physiology), and assistants. Practical instruction in Zoology and Comparative Anatomy is also given by the professor, Mr. Ray Lankester, and his assistants. For the details, we must refer our readers to the prospectus of the Medical Faculty, and also to that of the Faculty of Science, of the College.

At the *Westminster Hospital*, a course of lectures and demonstrations on Histology and Practical Physiology is given by Dr. Heneage Gibbes.

In *Owens College*, *Manchester*, a very complete course of practical Physiology is conducted during the year by Mr. Waters, the Brackenbury Professor of Physiology. The class meets for systematic work in Practical Histology and Physiological Chemistry, and for demonstrations in Experimental Physiology. The Physiological Laboratory is open daily during the winter and summer sessions.

Courses of Practical Biology and Practical Physiology are also given in the other provincial Medical Schools, or in institutions in connection with them.

Practical Physiology is taught in the University of Edinburgh, by Professor Rutherford; in that of Aberdeen, by Professor Stirling; and in that of Glasgow, by Professor Fleming. Courses are also given in the Edinburgh Extra-academical School; and in the Royal Infirmary School of Medicine, in Anderson's College, and in the Western Medical School, in Glasgow.

HOSPITAL APPOINTMENTS.—Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, four house-physicians and ten house-surgeons are appointed annually. A resident midwifery assistant is appointed every six months; an ophthalmic house-surgeon is also appointed for six months, and may be re-elected. A senior and a junior assistant-chloroformist are appointed annually. Each of these officers is provided with rooms by the hospital authorities. The senior assistant-chloroformist receives £50 a year; each of the others has an annual salary of £25. Two qualified assistants are appointed in the Electrical Department every six months, and receive a salary. Clinical clerks to the medical in-patients, and to the physician-accoucheur, also clerks and dressers for the out-patient and special departments, are chosen from among the students. Forty dressers for the surgical in-patients and the surgical casualty department are selected each year; and other in-patient dresserships may be obtained on payment of £10 10*s*. for three months, or £16 16*s*. for six months.

At *Charing Cross Hospital*, a medical and a surgical registrar are appointed, each with a salary of £40 a year. Two house-physicians, two house-surgeons, and a resident obstetric officer are appointed every six months, after examination. An electrical assistant is appointed every four months. The clinical clerks—three to each physician, and two to each assistant-physician, and the dressers—three to each surgeon and assistant-surgeon, and also two clinical clerks to the physician-accoucheur, and two to the assistant physician-accoucheur, are appointed for periods of four months. Each student must act as in-patient clerk and dresser. Pathological assistants, who assist at the *post mortem* examinations, are appointed each month for three months.

At *St. George's Hospital*, house-physicians and house-surgeons are appointed half-yearly from among the perpetual pupils. The appointments are held for twelve months, with board and residence in the hospital, free of expense. Each pays a deposit of 50 guineas, which is returned if the duties of his office have been satisfactorily performed. A curator of the Pathological Museum, and a medical and a surgical registrar, each with a salary of £50; an ophthalmic registrar and a microscopic pathologist, each with a salary of £25; and an obstetric assistant, with board, residence, and a salary of £100, are appointed annually. An assistant-house-physician, an assistant house-surgeon, an ophthalmic assistant, two assistant medical registrars, and an assistant surgical registrar, are appointed every six months. Clinical clerks and dressers are also appointed.

At *Guy's Hospital*, there are appointed during the year senior and junior house-physicians, senior and junior house-surgeons, senior and junior obstetric residents, surgeons' dressers, clinical assistants, dressers in the eye wards, *post mortem* clerks, obstetric out-patient clerks, assistant physicians' clerks, dental surgeons' dressers, aural surgeons' dressers, medical clinical clerks, assistant-surgeons' dressers and dressers in the surgery, obstetric ward clerks, surgical clinical clerks, assistant-surgeons' clerks, extern obstetric assistants, and clerks in the room for applying electricity. All students have opportunities of becoming clinical ward clerks to the physicians and surgeons, as well as dressers to the assistant-surgeons, and dressers in the surgery; and the diligence with which they perform the duties of these offices is an important test of their fitness for the higher posts.

At *King's College Hospital*, a physician's assistant, house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers, are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, every student is expected to act as clinical clerk to the medical out-patients for six weeks in his second year, and to dress for three months in the surgical out-patient department; also to act as *post mortem* clerk for three months. The following appointments are also made: five house-physicians (qualified for registration) every six months; clinical clerks (open to all full pupils) every three months; a resident accoucheur (qualified) every six months; clinical obstetric clerks every three months in the in-patient, and every six weeks in the out-patient department; five house-surgeons, for six months (each being provided with board and residence); surgical dressers every three months; three clinical assistants (each with a salary at the rate of £80 *per annum*); a medical and a surgical registrar (each with £100 *per annum*); a dental assistant, ophthalmic and aural dressers, and *post mortem* clerks.

At *St. Mary's Hospital*, four resident medical officers are appointed for twelve months, and a resident obstetric officer for six months. They all reside in the hospital, free of expense. All students are required to perform the duties of clinical clerk and dresser for eight months after passing the primary examination, after having acted as dressers in the casualty and electrical departments.

At the *Middlesex Hospital*, six house-surgeons, six resident physicians' assistants, and two resident obstetric physicians' assistants are appointed in each year by competitive examination. They pay, on appointment, ten guineas. The appointments of clinical clerks and dressers are so arranged that every student may, at some period of his attendance on hospital practice, hold both a clerkship and a dressership. Obstetric physician's clerks and ophthalmic dressers are appointed.

At *St. Thomas's Hospital*, two resident and one non-resident house-physician, an assistant house-physician, two house-surgeons, an assistant house-surgeon, and a resident accoucheur, are selected every three months from gentlemen who have obtained professional diplomas. An ophthalmic clinical assistant is also appointed with a salary of £50 per annum for six months. Clinical clerks and dressers to in-patients are selected from pupils, to the number in all of at least 100 each year; and clinical clerks and dressers to out-patients to the number of 80 or 100 each year. Two registrars, at an annual salary of £100 each, are appointed each year. There are also numerous minor appointments of anatomical assistants, prosectors, obstetric clerk, &c., open to all students.

In *University College Hospital*, eight house-physicians, six house-surgeons, and four obstetric assistants, are selected annually by examination from among the senior students. They reside in the hospital, paying for their board. Out-patient physicians, and surgeons' assistants, clinical clerks, surgeons' dressers, and ophthalmic surgeons' assistants, are selected from among the pupils who are also students of the College.

At the *Westminster Hospital*, a curator of the museum, and pathologist, with a salary of £52 10*s.*, and a medical and a surgical registrar, each with a salary of £40, are appointed annually. Two house-physicians, a house-surgeon, and a resident obstetric assistant, are appointed by examination for six months; they are provided with board and rooms in the hospital, and the senior house-physician, as chloroformist, receives an additional honorarium of £21. An assistant house-surgeon is appointed by examination. Clinical assistants to the assistant-physicians and assistant-surgeons, and to the officers in charge of special departments are appointed from among the most advanced students of the fourth year. Every student must act as out-patient dresser during three months in his first year, and afterwards hold the office of in-patient dresser and clinical clerk during a period of three months each.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant, and two resident dressers, are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months, and a resident dresser every three months.

At the *Bristol Royal Infirmary*, students are appointed to clinical clerkships in their third and fourth years. Surgeons' dressers are appointed after the first year of study, and, when sufficiently qualified, reside in the hospital in weekly rotation, and act under the supervision of the house-surgeon. The dressers and clinical clerks pay fees in addition to those for hospital practice; the former £5 5*s.* for each six months, the latter £5 5*s.* for six months, or £8 8*s.* for a year. Obstetric clerks pay £3 3*s.* for three months. A pathological clerk is appointed every four months.

At the *Bristol General Hospital*, clinical clerks, dressers, and obstetric clerks are appointed. The clinical clerks and dressers pay each an extra fee of £5 5*s.* for six months; and the obstetric clerks £3 3*s.* for three months. The dressers reside in the hospital in rotation, free of expense.

In the *Leeds General Infirmary*, two house-physicians, four house-surgeons, twenty-four medical ward clerks, and the same number of assistant-physicians' clerks and assistant-surgeons' dressers, eight dressers in the eye wards, twelve *post mortem* clerks, and eighteen dressers in the casualty wards are appointed annually.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are selected (by competitive examination if necessary) from pupils of the school who have obtained a legal qualification to practise; they hold office for six months. Three clinical clerks are appointed to each physician, and three or more dressers to each surgeon, and two clerks to the wards for special diseases of women; they hold office for three months. *Post mortem* clerks are appointed for periods of six weeks. This appointment is required to be held by every student.

At the *Manchester Royal Infirmary* the following non-resident appointments are made annually:—a surgical registrar, salary £70 to £80; a pathological registrar, salary £80; a medical registrar, salary £50; and two assistant medical officers, salary £100 each. There are also appointed a resident medical officer for two years, also a resident surgical officer, and a resident medical officer at the Convalescent Hospital at Cheadle, each for one year, with a salary of £150; and a resident medical officer at the Fever Hospital at Monsall, for one year, at £200. Eight house-surgeons and four house-physicians are appointed in each year. An assistant to the resident medical officer at Monsall, with a salary of £50 per annum, and one at Cheadle, are appointed every six months. House-surgeons must possess registrable qualifications. Two or more clinical clerks are attached to each physician and assistant-physician, and two or more dressers to each surgeon and assistant-surgeon: two clerks are also appointed to the pathological registrar and to each of the assistant medical officers. They hold these for three months. Accident-room dressers are also appointed for three months.

In the *Newcastle-on-Tyne Infirmary*, four times in the year, two resident medical assistants, two resident surgical assistants, three non-resident clinical clerks, and sixteen dressers, are appointed for three months. Assistants in the pathological department and in the eye department, and to the dental surgeon are also appointed.

In the *Edinburgh Royal Infirmary*, resident physicians and resident surgeons are appointed for six months. Clinical clerks are also appointed; and each surgeon appoints several dressers for six months. There are also assistants in the pathological department.

In the *Glasgow Royal Infirmary*, four physicians' and six surgeons' assistants are boarded and lodged in the Hospital. The appointments can be held for twelve months, and holders are eligible for re-election. These appointments are open to students who have passed all their examinations except the last, or to qualified gentlemen. There are also numerous clerkships and dresserships.

TUTORIAL INSTRUCTION.—In addition to the ordinary courses of lectures and hospital practice, and practical instruction, many of the medical schools have an officer whose special duty it is to direct the pupils in their studies, and to hold classes for the guidance of those who are about to present themselves for examination before the licensing boards.

SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.—In addition to the rewards for diligence in professional study, many of the medical schools offer yearly one or more scholarships, usually in general literature, and in some instances in science. The competition is open to gentlemen about to commence their hospital studies; and the successful candidate is expected to enter as a pupil of the school in which the examination has been passed. In the examination in general literature, the subjects are usually those of preliminary education as defined by the General Medical Council, or of the Matriculation Examination of the University of London. In the Science scholarships, the usual subjects are Chemistry, Botany, and Zoology. The yearly value of the scholarships and exhibitions varies from £100 to £10.

There are also many scholarships and exhibitions, varying in value from £100 to £20, open to students during their period of professional study, or within a limited time after they have passed their final examinations for licences to practise. These exhibitions are in some cases awarded after examination in subjects of preliminary education; in others, they are given after examination in groups of subjects of professional education, elementary or practical.

Special rewards are also offered in many of the schools for evidence of proficiency in clinical observation.

For further information respecting the scholarships and exhibitions, and regarding the class prizes, as well as for many details which we are obliged to omit, our readers must consult the prospectuses of the schools and our advertising columns.

FRANCE.

GRADUATION IN MEDICINE.

THE degree of Doctor of Medicine in the University of France is conferred by the Faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons under regulations laid down by the Government.

The studies necessary for obtaining the degree last four years. During the first three years, the student may attend either one of the Faculties, or an *École de plein exercice*, or one of the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be pursued in a Faculty or in an *École de plein exercice*.

Sixteen inscriptions must be taken out, one every three months. On taking the first inscription, the student must present his certificate of birth, and, if a minor, the consent of his father or guardian ; also the diplomas of Bachelor of Letters and of Sciences.

Every candidate must undergo a course of practical study as follows :—*First Year:* Physics, Chemistry, and Natural History. *Second and Third Years:* Anatomy and Physiology. *Fourth Year:* Operative Surgery and Pathology. Attendance on hospital practice (which is also obligatory), commences after the eighth inscription and continues through the remaining period of study.

There are five examinations ; the first, after the fourth inscription and before the fifth ; the first part of the second, three months after the tenth inscription and before the twelfth, and the second part after the twelfth and before the fourteenth inscription ; the third cannot be passed until three months after the sixteenth inscription. Candidates who do not pass the first examination in October or November at the latest are put back to the end of the scholastic year, and cannot take out any inscriptions during that year. Candidates rejected at the other examinations are put back for three months, except after the examination in Practical Surgery, when the period is six weeks. Two other examinations have to be undergone, and the candidate must present a thesis on a subject chosen by himself.

The subjects of the five examinations are as follows :—*First Examination :* Physics, Chemistry, and Natural History, in their application to Medicine. *Second Examination :* First part, Dissections, Anatomy, and Histology (oral) ; second part, Physiology (oral). *Third Examination :* First part, Performance of Operations, External Pathology, Midwifery, and Operative Surgery (oral) ; second part, Internal Pathology or Medicine, and General Pathology. *Fourth Examination :* Hygiene, Forensic Medicine, Therapeutics, Materia Medica, and Pharmacology. *Fifth Examination :* First part, Clinical Surgery and Obstetrics ; second part, Clinical Medicine, and practical demonstrations in Pathological Anatomy.

Pupils of the *Ecoles de plein exercice* may pass the first and second examinations in the school. For this purpose, two examinations are held each year ; one in August, for the first examination, and the second part of the second ; the other in April, for the first part of the second examination. Rejected candidates may present themselves, after three months, for examination by a Faculty of Medicine. Students of preparatory schools in which the instruction corresponds with the programme of the first three years of study required, may pass in them the first examination and the first part of the second ; the second part of the second examination must be passed before a Faculty or in an *Ecole de plein exercice.* Pupils of other preparatory schools may defer the first examination till after the twelfth inscription. In that case, they undergo both parts of the second examination before the thirteenth inscription, and, from the commencement of the second year of study, are submitted to examinations at the end of each six months, the results of which are transmitted to the Faculties, to be taken into account in the examinations for the doctorate.

Candidates for the grade of *officier de santé* must take out sixteen inscriptions, the regulations regarding which are the same as for the degree of doctor. The programme of practical instruction to be pursued is : *First year,* Physics, Chemistry, and Natural History ; *Second Year,* Anatomy and Physiology ; *Third Year,* Anatomy, Physiology, and Operative Surgery ; *Fourth Year,* Anatomy and Operative Surgery. Attendance on hospital practice commences with the fifth inscription. The whole of the sixteen inscriptions may be taken out in a preparatory school, where a complete course of instruction, as mentioned above, is given. At other preparatory schools, not more than fourteen inscriptions can be taken out.

There are six examinations : one at the end of each of the first three years ; first, in Physics, Chemistry, Natural History, and Elementary Anatomy (bones and ligaments) ; second, in Descriptive Anatomy and Physiology ; third, in Medicine and Surgery. After the sixteenth inscription, there are three final examinations (*examens définitifs*) ; first, in Dissection, Anatomy, and Physiology ; second, in Operative Surgery, Medicine, Surgery, Therapeutics, and Materia Medica ; third, in Clinical Medicine, Surgery, and Midwifery. No thesis is required.

Foreign medical practitioners, desirous of permission to practise in France as *officiers de santé,* must present their diplomas to the Secretary of the Faculty of Medicine. If the Council of the Faculty report favourably, the permission is granted. If they desire to obtain the degree of Doctor of Medicine, they must pass the last two examinations and present a thesis. Exception may be made in the case of medical men of acknowledged eminence, to whom the Faculty may at once grant all the privileges of the doctorate.

Foreigners may be admitted to a French faculty on presenting their certificates of study in their countries and paying a fee of 4*l.*

There is no fee for inscriptions. The fees to be paid each year, including practical work and library (10 *francs*), are :—First year, 70 *francs* ; second and third years, each 50 *francs* ; fourth year, 30 *francs* ; for examination for the degree of doctor, each examination or part of examination, 55 *francs* (in all 440 *francs*) ; thesis, 240 *francs. Officiers de santé* pay 30 *francs* for each of the three yearly examination ; for the three final examinations, 100, 110, and 210 *francs* respectively.

MEDICAL EDUCATION.

Medical Education in France is under the control of the State, and is given in the Faculties of Medicine and Pharmacy, the *Écoles de plein exercice,* and the Preparatory Schools of Medicine and Pharmacy.

The Faculties are six in number ; five—those of Paris, Montpellier, Nancy, Lille, and Lyons—are schools of Medicine ; the other, at Bordeaux, is a mixed Faculty of Medicine and Pharmacy. There are two *Écoles de plein exercice,* at Nantes and at Marseilles. There are Preparatory Schools at Amiens, Angers, Arras, Besançon, Caen, Clermont Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, Toulouse, and Tours.

Faculty of Medicine in Paris.

The School of Medicine in Paris is open to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 40 *francs* is expected from each student.

The medical session begins on November 1.

The instruction in the Faculty of Medicine in Paris is given by the following professors: M. Sappey, Anatomy; M. Robin, Histology; M. A. Gautier, Medical Chemistry; M. Baillon, Natural History; M. Gavarret, Medical Physics; M. Regnauld, Pharmacology; M. Peter and M. Damaschino, Internal Pathology or Medicine; M. Duplay, Practical Surgery; M. Lannelongue, Surgery; M. Hayem, Materia Medica and Therapeutics; M. Cornil, Pathological Anatomy; M. Laboulbène, History of Medicine; M. Pajot, Midwifery; M. Proust, Hygiene; M. Brouardel, Forensic Medicine; M. Vulpian, Comparative and Experimental Pathology; MM. G. Sée, Hardy, Potain, Jaccoud, Clinical Medicine; MM. Richet, Verneuil, Trélat, Le Fort, Clinical Surgery; M. Pajot, Clinical Midwifery; M. Grancher, Diseases of Children; M. Charcot, Diseases of the Nervous System; M. Panas, Clinical Ophthalmology; M. Ball, Mental Pathology; M. Fournier, Diseases of the Skin and Venereal Diseases.

Auxiliary courses are given by *agrégé* professors, as follows: Anatomy and Physiology, MM. Rochet, Reynier, and Remy; Physics, MM. Gariel and Guebhard; Chemistry, MM. Hanriot and Pouchet; Natural History, M. Blanchard; Medicine and Forensic Medicine, MM. Straus, Debove, Rendu, Hallopeau, Landouzy, Raymond, Troisier, Joffroy, Hanot, Quinquaud, and A. Robin; Surgery, MM. Terrillon, Humbert, Richelot, Peyrot, Bouilly, Reclus, Kirmisson, Segond, and Campenon; Obstetrics, MM. Pinard, Budin, and Ribemont-Dessaignes.

Practical instruction is given under the guidance of the following *chefs des travaux*: M. Farabeuf, Anatomy; M. Faguet, Natural History; M. Hanriot, Chemistry; M. Guebhard, Medical Physics; M. Cadiat, Histology; M. Laborde, Physiology; M. Gombault, Pathological Anatomy.

The Faculty of Medicine possesses laboratories for Anatomy (Professor Sappey), Physics (Professor Gavarret), Chemistry (Professor Gautier), Biological Chemistry (Professor Gautier), Practical Forensic Medicine (Professor Brouardel), Botany (Professor Baillon), Teratology (Director, M. Dareste), Experimental and Comparative Pathology (Professor Vulpian), Therapeutics (Professor Hayem), Pharmacology (Professor Regnault), Pathology (Professor Bouchard). There are also laboratories for practical instruction at several of the hospitals.

Attached to the Faculty of Medicine are the Botanical Gardens and Museum of Natural History; the Orfila Museum of Anatomy and Zoology, at the Ecole de Médecine; the Dupuytren Museum of Pathological Anatomy, in the Ecole Pratique; and the Library.

The prizes of the Faculty of Medicine are the following. The Corvisart prize, a gold medal of the value of 400 *francs* (£16) is offered for competition to all pupils of the Faculty who have also entered to one of the internal clinics. The subject is some question in medicine, the answer to which must be derived exclusively from facts observed in hospital practice. The Montyon prize, consisting of 700 *francs* (£28), is awarded to the author of the best essay on the prevalent diseases of the preceding year, their characters, symptoms, and treatment. The Barbier prize of 2,000 *francs* (£80) is offered annually to the inventor of an operation, or of instruments, bandages, &c., of general utility, and superior to anything of the kind that has been already in use. The Chateauvillard prize, also of 2,000 *francs*, is awarded yearly to the author of the best work on the medical sciences, printed between January 1 and December 31 of the preceding year. The works sent for competition must be in French. Graduation theses are admitted. An annual sum of 1,000 *francs* (£40) is awarded, under the will of the late Baron de Trémont, to a meritorious but poor student. An annual sum of 3,000 *francs*, bequeathed by Madame de Barkow, is applied to a similar purpose in the superior educational establishments in Paris. The Lacaze prize of 10,000 *francs* (£400) is offered biennially for the best essay on phthisis or on typhoid fever—the subjects being taken alternately. After the examination of the theses, the Faculty names to the Minister of Public Instruction the candidates worthy of special distinction, in the form of silver medals, bronze medals, and honourable mention. Students' bursaries of the value of 1,200 *francs* are awarded after competition. Each bursary is tenable for one year; and the holder, if desirous of its renewal, must again compete. Candidates must be natives of France, at least eighteen years of age. Travelling bursaries are also awarded.

THE COLLEGE OF FRANCE.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., Experimental Medicine, by Dr. Brown-Séquard; General Anatomy, by M. Ranvier; Natural History of Organised Bodies, by M. Marey; Comparative Embryogeny, by M. Balbiani; Organic Chemistry, by M. Berthelot; Mineral Chemistry, by M. Schützenberger. The Histological Laboratory is under the direction of M. Ranvier and M. Malassez, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey and M. François-Franck, is open to persons who enter their names for the purpose with the secretary of the Faculty of Sciences, and who have a sufficient knowledge of Physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology; but special attention is paid in this laboratory to the phenomena of circulation and motion, and their registration by suitable apparatus.

FREE MEDICAL INSTRUCTION.

In addition to the professors in the Faculty of Medicine, there are a number of lecturers whose instruction is recognised.

THE HOSPITALS OF PARIS.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any of the hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8.30 or 9 A.M. The following is a list of these institutions:

Hôtel Dieu, Parvis Nôtre Dame.—559 beds. *Physicians:* Drs. G. Sée, Hérard, Moutard-Martin, Gallard, Vulpian, and Empis. *Surgeons:* MM. Richet and Panas. The hospital possesses laboratories for histology, chemistry, and physiology; also a library for the use of the *internes*.

Hôpital de la Charité, 47 Rue Jacob.—504 beds. *Physicians:* Drs. Hardy (Clinical Professor), Féréol, Peter, Laboulbène, Desnos, and Bernutz; *Surgeons:* MM. Trélat (Clinical Professor) and Desprès; *Obstetric Physician:* M. Budin. The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

Hôpital de la Pitié, 1 Rue Lacépède.—719 beds. *Physicians:* Drs. Lancereaux, Dumontpallier, Jaccoud, Brouardel, Cornil, and Audhoui; *Surgeons:* MM. Verneuil and Polaillon.

Hôpital Lariboisière, 2 Rue Ambroise Paré.—706 beds. *Physicians:* Drs. Bouchard, C. Paul, Proust, Siredey, Duguet, and Gérin-Roze. *Surgeons:* MM. Duplay (Diseases of the Eye) and B. Anger. *Obstetric Physician:* M. Pinard. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larynx.

Hôpital Saint-Antoine, 184 Faubourg Saint-Antoine.—621 beds. *Physicians:* Drs. Mesnet, Hayem, Dieulafoy, Sevestre, Gourand, Landrieux, and Tenneson; *Surgeons:* MM. Périer and Delens.

Hôpital Necker, 151 Rue de Sèvres.—418 beds. *Physicians:* Drs. Potain, Rigal, and Rendu; *Surgeons:* MM. Le Fort and Guyon. The Civiale museum, containing numerous calculi and specimens of diseases of the urinary organs, is attached to the hospital.

Hôpital Beaujon, 208 Faubourg Saint-Honoré.—422 beds. *Physicians:* Drs. Millard, Guyot, Gombault, and Fernet; *Surgeons:* MM. Tillaux and Léon Labbé; *Obstetric Surgeon:* M. Ribemont-Dessaignes. The hospital possesses a library containing 1,500 volumes, and a large number of theses.

Hôpital Cochin, 17 Faubourg Saint-Jacques.—249 beds. *Physicians:* Drs. Bucquoy and Dujardin-Beaumetz; *Surgeon:* M. Th. Anger; *Obstetric Surgeon:* M. Marchand. An obstetric department is attached to this hospital; but only a limited number of students are admitted to the morning visit.

Hôpital Laennec, 42 Rue de Sèvres.—628 beds. *Physicians:* Drs. Ball, Damaschino, Ferrand, and Legroux; *Surgeon:* M. Nicaise.

Hôpital Bichat, Boulevard Ney.—200 beds. *Physicians:* Drs. Gouguenheim and Huchard; *Surgeon:* M. Terrier.

Hospice de la Salpêtrière, Boulevard de l'Hôpital.—1,821 beds for old persons, and 720 for female lunatics. *Physicians:* Drs. Charcot and Luys; *Surgeon:* M. Terrillon; *Physicians to the Lunatic Department:* Drs. Legrand du Saulle, Falret, and A. Voisin. There is a medical library, founded and supported by the *internes*; it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system; and MM. Luys and Voisin give courses of mental pathology.

Hospice de Bicêtre.—1,843 beds for old persons, and 773 for male lunatics and epileptics (the latter number includes nearly 200 epileptics and backward children). *Physician:* Dr. Joffroy; *Surgeon:* M. Berger; *Physicians to the Lunatic Department:* Drs. Charpentier, J. Voisin, and Bourneville; *Resident Physician:* M. Deny. The library, which was founded in 1865, contains about 2,000 volumes.

Hôpital des Enfants Malades, 149 Rue de Sèvres.—562 beds. *Physicians:* Drs. Grancher, Labric, Simon, Ollivier, and Descroizelles; *Surgeon:* M. de Saint-Germain. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

Hôpital des Enfants Assistés, 74 Rue Denfert Rochereau.—685 beds. *Physician:* Dr. Blachez; *Surgeon:* M. Guéniot.

Hôpital Trousseau, 89 Rue de Charenton.—427 beds. *Physicians:* Drs. Triboulet, D'Heilly, Cadet de Gassicourt: *Surgeon:* M. Lannelongue.

Hôpital Saint-Louis, 40 Rue Bichat.—843 beds; of which 583 are occupied with cases of skin-disease, 28 with obstetric cases, and the rest with surgical cases. *Physicians:* Drs. Hallopeau, Lailler, Vidal, Guibout, Besnier, and Fournier; *Surgeons:* MM. Péan and Le Dentu; *Accoucheur:* M. Porak. General medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. A museum containing several hundred models and drawings, illustrating diseases of the skin; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

Hôpital du Midi, 111 Boulevard du Port-Royal.—336 beds, devoted exclusively to the reception of cases of venereal disease. *Physician:* Dr. Mauriac; *Surgeon:* M. Horteloup.

Hôpital de Lourcine, 111 Rue de Lourcine.—243 beds. *Physicians:* Drs. Martineau and Hutinel; *Surgeon:* M. Pozzi. Students are admitted to the hospital by special ticket.

Hôpital Tenon, Rue de la Chine.—825 beds. Besides these, 190 beds can be added in cases of epidemics, &c. *Physicians:* Drs. Straus, Landouzy, Troisier, Hanot, Ducastel, and Dreyfus-Brissac. *Surgeons:* MM. J. Lucas-Championnière and Gillette. *Accoucheur:* M. Maygrier.

Maison d'Accouchement, 123 Boulevard du Port-Royal.—316 beds. *Physician:* Dr. Labadie-Lagrave; *Surgeon:* M. Tarnier; *Assistant-Surgeon:* M. Marchand. The hospital is employed exclusively for the education of midwives, and is not open to students of medicine. Attached to the hospital is a school for midwives.

Clinique d'Accouchement, 89 Rue d'Assas. *Surgeon:* M. Pajot.

Hospital Appointments in Paris: Concours.

The medical staff of each hospital in Paris consists of—1. Physicians, Surgeons, and Obstetric Medical Officers; 2. Prosectors; 3. *Internes* and *Externes* in Medicine and in Surgery; 4. *Pharmaciens;* 5. *Internes* in Pharmacy.

All the appointments in the hospitals of Paris are obtained by *concours*; and, when vacant, are eagerly competed for.

Each medical service is under the direction of a physician, and comprises also an *interne* and three or four *externes*. The organisation of the surgical departments is similar; but the number of pupils is greater, and there are generally two or three *internes* and five or six *externes*.

The *interne* is the most direct assistant of the hospital physician or surgeon; he accompanies him in his morning visit, and himself visits the patients in the evening. The *internes* remain on duty in turn to attend to urgent accidents and cases of illness.

The *externes*, who are appointed for three years, have to take records of cases, either alone or under the direction of the *internes*, to assist the latter in dressing difficult cases, and to dress the minor cases.

The *concours* for the *externat* generally takes place in October. Candidates must not be under 18, nor above 26 years of age. They must produce, 1. a register of birth; 2. a certificate of revaccination; 3. a certificate of good conduct, signed by the mayor of the commune in which the candidate is domiciled; 4. a certificate of at least one inscription in a Faculty of Medicine. The examination consists in, 1. an oral description of some subject in descriptive anatomy; 2. a similar description of some elementary subject in pathology or minor surgery. For each five minutes are allowed, after five minutes of reflection. The maximum number of marks that can be gained by a candidate is 20 for each examination. The examination is conducted by four physicians and three surgeons of the central bureau.

The *concours* for the *internat* takes place nearly at the same time as that for the *externat*. Candidates must not be more than 28 years old, and must produce certificate of having performed the duties of *externe*, at least from the first day of the preceding January, without interruption (unless this have been unavoidable); also certificates from the physicians and surgeons and the directors of the hospitals in which they have performed the duties of *externe*, testifying to their punctuality, obedience, and good conduct. The examination commences with a written essay on some subject in anatomy and medical or surgical pathology, for which two hours are allowed. This is followed by an oral examination in the same subjects; ten minutes being allowed for each answer after ten minutes of consideration. The maximum of marks obtainable for the written examination is 30; for the oral 20. At the end of the *concours*, the candidates are classified according to the number of marks; and the 35 or 40 first on the list are nominated *internes*.

In November, the *internes* are invited to compete for prizes. To those of the first and second years are offered a silver medal, books, and two certificates of honour. Those of the third and fourth years compete for a gold medal, a silver medal, and two certificates of honour. The successful candidate for the gold medal is entitled to two additional years of *internat*.

The *interne* who takes the first place in the *concours* also has the Arnal prize (books and instruments, value 500 *francs*), the Dusol prize (300 *francs*), the Godard prize (a box or case of instruments, value 200 *francs*); and, if he be attached to the surgical department of the Charité Hospital, the Barbier prize of about 1,250 *francs*. The Burlaud prize of 500 *francs* is awarded to one of the *internes* placed fifth, sixth, and seventh on the list; often, however, the three divide it. The Civiale prize, of the value of 1,000 *francs*, is given every second year to the best essay, by an *interne* on duty, on some point in the pathology of the genito-urinary passages.

The *internes* receive 600 *francs* for the first year, 700 *francs* the second year, 800 *francs* the third year, and 1,000 *francs* the fourth year. Some of them are also provided with lodging, fire, and light; others receive 400 *francs* yearly in lieu of lodging.

The *externes* at the central hospitals (Charité, Clinique, Hôtel-Dieu, and Pitié) are not paid; at those more distant from the centre of the city (Necker, Cochin, les Enfants Malades, &c.), they receive 300 *francs* yearly; at others more distant (Beaujon, Lariboisière, Saint-Antoine, Trousseau, Saint-Louis), 365 *francs* yearly; at the Maison de Santé, 300 *francs'* yearly, and 300 *francs* for expenses; at the Tenon Hospital, in consideration of the distance, 50 *francs* monthly.

Candidates for the office of physician, surgeon, or obstetric officer at the hospitals, are admitted to *concours* on producing evidence of being natives of France, or naturalised, and of having had the degree of doctor of medicine for two years at least. They have to undergo a written and oral examination on the various branches of medicine and surgery.

GERMANY.

GRADUATION IN MEDICINE.

In the German Empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine—namely, those of Berlin, Bonn, Breslau, Erlangen, Freiburg, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

No one can legally practise Medicine in this Empire unless he have passed the Staats-Examen. The law forbids any one to call himself *Arzt* (Physician) unless he have passed the State Board; or Doctor, unless he have obtained the degree after examination at some University. The Doctor who has not passed the State Board can hold no professional appointment, nor can he receive payment for his services. The practitioner who is neither doctor nor physician, if any mishap occur through his ignorance, is punished by fine and imprisonment. Most students pass both examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma of any kind can be obtained in Germany without a certificate of general education, obtained after examination at a gymnasium or public school in Greek, Latin, at least one Modern Language besides German, Logic, the Physical Sciences, and Mathematics. A candidate who cannot present this or an equivalent certificate must pass an examination in these subjects.

The number and character of professorial chairs in the Medical Faculties vary much in the different Universities; but in all there are three classes of teachers—professors, extraordinary professors, and *privat-docents*.

The professors are appointed for life, and at the end of thirty years' service can retire on a pension; they receive a fixed salary from the State or University, a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary varies from 120*l.* to 480*l.* annually, and is increased every ten years by the addition of from 20*l.* to 50*l.* The students' fees for the entire course vary in different schools from 36*l.* to 52*l.*

The extraordinary or assistant professors are appointed from among the *privat-docents*. As a rule, their compensation comes only from students' fees, but occasionally a small fixed salary is allowed.

There are no independent schools in Germany, but young men of ability can establish themselves as private teachers, demonstrators, &c., in the immediate vicinity of the Universities, relying on their own talents and tact to secure pupils. These are the *privat-docents*, much of whose teaching consists in giving short courses, of from six to eight weeks' duration, on special subjects. Their compensation is from students' fees, and they may not underbid the regular professor. At some Universities they are furnished with rooms, and given a share of the clinics; at others, they receive little or no assistance.

The course of study at the German Universities varies according to the requirements for the particular medical degree, but in no case is it less than three years. At some, the course extends over four years. The following lectures are the least which will be accepted by any of the University Faculties, and may be taken in whatever order the student may wish. The courses occupy nine-and-a-half months in each year. For one year: Chemistry, six hours weekly; Physics, four hours weekly; Zoology and Comparative Anatomy, three hours weekly; Botany, three hours weekly; Mineralogy and Geology, two hours weekly; Anatomy, Histology, and Preparation of Specimens, ten hours weekly; Physiology and Laboratory Work, eight hours weekly; General Pathology, Pathological Anatomy, and Practical Work, six hours weekly; Pharmacology and Toxicology, two hours weekly; Obstetrics and Gynæcology, with Clinics, three hours weekly; Eye and Ear Clinics, Use of Ophthalmoscope, Operations, four hours weekly; Forensic Medicine, two hours weekly. For two years: Special Pathology and Medical Clinic at a Hospital, ten hours weekly; General and Special Surgery, Hospital Clinics, and Operations, ten hours weekly for one year, or five hours weekly for two years. This course may not be taken at the same time as the previous medical course.

REGULATIONS FOR THE STATE EXAMINATION.

The following are the regulations for the German Staats-Examen, as decided by an Order in Council, dated June 2, 1883. They came into force on December 1, 1883.

1. Permission to practise Medicine within the German Empire may be granted by the following bodies:—*a.* The central authorities of those confederate States which possess one or more universities—namely, the universities of the kingdoms of Prussia, Bavaria, Saxony, and Würtemburg, of the Grand Duchies of Baden, Hesse, and Mecklenburg-Schwerin, together with the universities of the Grand Duchy of Saxony and of the Saxon Duchies; *b.* the Ministry of Alsace-Lorraine.

2. Permission to practise is granted to any one who has passed a complete professional examination.

3. The examination may be conducted by a medical examining commission in an University of the German Empire. The commission, including the president and secretary, is chosen every year after consultation with the Medical Faculty of the University where the examinations are to be held.

4. The examinations commence in November, and are not continued beyond the middle of July in the following year. Applications for admission to the examination are received by the proper authorities up to November 1; delayed applications can only be granted for special reasons. Candidates who complete the prescribed course of medical study at Easter require, in order to be admitted to examination during the current examining year, a special permission, which is only granted under exceptional circumstances. The application for admission to examination must be accompanied by the following documents:—*a.* Evidence of a full course of instruction at a gymnasium of the German Empire; certificates from a gymnasium outside the Empire are only exceptionally received; *b.* Evidence of having gone through a course of medical study, of at least nine half-years' duration, in an University of the German Empire; certificates from foreign universities are recognised, wholly or in part, only in exceptional circumstances; *c.* Evidence that the candidate has passed the medical preliminary examination (*Verprufung*) in a German University, and has subsequently studied Medicine in an University during at least four half-years; *d.* Evidence that the candidate has, during at least two complete half-years, been occupied as medical officer (*praktikant*) in the surgical, medical, and obstetrical wards of a hospital; that he has himself completed at least two labours in the presence of his teacher as an assistant; and that he has acted as *praktikant* for a half-year in an ophthalmic hospital; *e.* A short account of the candidate's life. Within three weeks after receiving permission to present himself, the candidate must apply personally to the President of the Examining Committee, producing his permission and a receipt for the fees. No special notice of this is given to the candidate.

5. The examination embraces:—*a.* Anatomy; *b.* Physiology; *c.* Pathological Anatomy and General Pathology; *d.* Surgery and Ophthalmic Surgery; *e.* Medicine; *f.* Obstetrics and Gynæcology; *g.* Hygiene.

6. The examination in Anatomy includes:—*a.* A demonstration of the parts contained in one of the principal cavities of the body, or a dissection and demonstration of some region of the trunk or limbs; *b.* The making and demonstration of an anatomical preparation, to be followed by an examination in Osteology, and by one on the viscera, nerves, or vessels, of a preparation placed before the candidate; *c.* The making and demonstration of a microscopic preparation, and an examination in Histology.

7. In the Physiological examination, the candidate has to give *vivâ voce* answers to two questions.

8. In the Pathological examination the candidate must—*a.* Make a complete examination of at least one of the three principal cavities of the body, and write a report on the same; *b.* Explain one or more pathological preparations, one at least of which must be microscopic, and also answer a question in general Pathology, and one in Pathological Anatomy.

9. Each of the divisions *a*, *b*, *c*, and *g* of the examination is conducted by one examiner. Not more than four candidates can be examined at the same time in any division.

10. The Surgical and Ophthalmological examination embraces four parts, three relating to General Surgery, and one to Diseases of the Eye. The three surgical portions of the examination are conducted by two examiners in the surgical wards of a large general hospital, or in an University clinic, or on the patients in a polyclinic. *a.* On each of two consecutive days the candidate has to examine a patient in the presence of an examiner, and to give the previous history, diagnosis, prognosis, and treatment of the case; the record is to be given to the examiner, and, on the same day, the candidate must write at his home a critical commentary on the case, and deliver it next morning, dated and signed, to the examiner. *b.* He must, during the next seven days,

visit each of the two patients at least once a day, or, if the examiner require, twice daily, and keep, in a form which is supplied to him, a daily report of the progress of the case : if the patient die before the end of the seven days, he must write a commentary, with an account of the *post mortem* examination. If the patient be dismissed before the end of the seven days, the examiner may determine whether the candidate shall examine another patient. The candidate is also required to give evidence, on other patients, of his ability to recognise surgical diseases, and of his skill in performing minor surgical operations. *c.* He must undergo a *vivâ voce* examination in operative surgery, perform on the dead body an operation, such as the ligature of an artery, and show that he possesses a knowledge of instruments adequate for a practising surgeon. *d.* He must be examined orally and practically on fractures and dislocations. Two examiners must be present at *c* and *d.* Each examiner must be present at least three times during the examination (*b*), to go through the report with the candidate, and, if necessary, require additions. In the clinical portion of examination (*a* and *b*) not more than three candidates, in the technical part not more than six, can be examined at the same time. The examination in Ophthalmology is conducted by one examiner, in whose presence the candidate must examine and report on a case of disease of the eye. He must visit the patient for three subsequent days, and during this time prove, on other cases, that he possesses a knowledge of the principles of ophthalmic surgery. Three candidates at most are admitted simultaneously to this examination.

11. The Medical Examination is conducted, as regards the clinical portion, on the same plan as the surgical ; and the candidate has to answer, in writing, in the presence of an examiner, questions on prescribing, to state the maximal doses of medicinal substances shown to him, and to give oral proof that he has an adequate knowledge of Pharmacy and Toxicology. This portion of the examination may be entrusted to a third examiner. Not more than three candidates can be examined at the same time.

12. The Obstetric and Gynæcological examination is conducted by two examiners in a public lying-in institution. *a.* The candidate must, in the presence of the examiner or of an assistant medical officer of the institution, examine a woman in labour, and state the period of labour, the position of the child, the prognosis, and the proper proceeding to be followed ; in cases of normal, and, if required, of abnormal labour, he must apply the necessary aid, including operation ; and, after the labour is completed, he must write within twenty-four hours a critical account of the case and hand it to the examiner the next day. *b.* During the next seven days he must visit the woman twice daily, and must draw up a complete report on the case of the mother and child, and on any diseases by which they may be affected. During the same time, he will have opportunities of proving his knowledge of pregnancy and labour and of the diseases of women. If the woman who has been confined die before the end of seven days, he must draw up a critical report of the case, with an account of the necropsy. *c.* The candidate must, in the presence of both examiners, show his acquaintance with recognised obstetric operations, and must, on the phantom, make the diagnosis of the various abnormal presentations, perform turning, and apply the forceps. Not more than one candidate can be clinically examined on the same patient ; and, in the technical examinations, not more than four can be examined simultaneously.

13. In Hygiene, the candidate has to give oral answers to two questions put by one examiner in the presence of the president. Each candidate is examined for not longer than fifteen minutes.

14. The questions to be put in the Sections 6, *b*, *c*, 7, 8*c*, 10A *c*, *d*, and 13 are determined by lot. If necessary, the examiner may put other questions bearing on the subject of examination.

15. Students of medicine are admitted to the first three and the seventh divisions of the examination ; those who have attended or held office in the respective clinics are admitted to the clinical portions.

16. A special report is made of the result of each division of the examination ; with, if the judgment be 'insufficient' or 'bad,' a short statement of the grounds of the decision.

17. The questions and the patients in each examination are seen by the candidate for the first time at its commencement. As a rule, an interval of not more than eight days comes between two divisions of the examination. Candidates for admission to the examination in Physiology must have passed that in Anatomy ; and both these must have been passed before admission to the remaining portions. The order in which these may be taken is determined by the president ; but the examination in Obstetrics and Gynæcology must not immediately follow that in Pathology. If a candidate fail in any one of the subjects except Anatomy and Physiology, he may either present himself at once for examination in the other subjects, or defer it until he is again examined in the subject in which he has failed.

18. The result of the examinations is denoted by the terms 'very good,' 'good,' 'sufficient,' 'insufficient,' and 'bad.' A candidate on whom one of two examiners makes the report 'insufficient,' or 'bad,' is rejected.

19. After the completion of the examinations in each division, the reports are delivered to the president, who sums up the results.

20. If the result of the examination in any one division or part of a division be 'insufficient' or 'bad,' the candidate must be again examined in that subject. If the decision on an entire division be 'insufficient,' the candidate is not re-admitted to examination under three months : if 'bad,' not under six months. If the candidate fail in a portion of one of the divisions, the interval must be at least six weeks for 'insufficient,' and at least three months for 'bad.' In all cases, the re-examinations must be undergone in the next following examination-year at latest ; otherwise the previous portions of the examination must be repeated. Exceptions are allowed only for special reasons. A candidate rejected at the second examination is not again admitted to examination except under special circumstances.

The fees for the examinations amount to 200 marks (about 10*l.*) ; namely, Anatomy, 20 ; Physiology, 12 ; Pathology, 16 ; Surgery and Ophthalmology, 57 ; Medicine, 35 ; Obstetrics and Gynæcology, 24 ; Hygiene, 6 ; Expenses, 30.

PRELIMINARY MEDICAL EXAMINATION.

The following are the regulations for the examinations referred to in Section 4 *c.* of the preceding.

1. The preliminary medical examination is conducted by the examining board of the University in

which the candidate has matriculated. Exceptions can only be allowed by the Chancellor of the Empire acting in conjunction with the central authority. The examining board consists of the Dean of the Medical Faculty as president, and the teachers of the subjects of examination.

2. The president has the management of the examination. As many examinations are held in each academical half-year as will meet the demands. Applications made later than fourteen days before the end of the lectures have no claim to consideration during the current half-year. Not more than four candidates are admitted to any one examination.

3. Applications for admission to examination must be addressed to the president, and must be accompanied by (*a*) a certificate of maturity from a gymnasium, (*b*) evidence of professional study during at least four half-years in a German University. The regulations concerning recognition of foreign gymnasia and universities are similar to those for the Staats-examen.

4. If the student be admitted, and have paid the fee, he receives through the president at least two days' written notice of the examination. If he do not appear at the right time, or fail to appear at all, half the fee is forfeited, and he is put back to one of the next examination terms.

5. The examination is oral and public; the president being present throughout. The student is examined in Anatomy, Physiology, Physics, Chemistry, and Botany, by the teachers of the respective subjects, and in Zoology by a teacher of Anatomy or of Zoology. The examination in each subject is of fifteen minutes' duration. Candidates who have obtained the degree of doctor after examination in the Natural Sciences, are examined only in those subjects which were not included in the previous examination.

6. The circumstances and results of the examination are reported by each examiner to the president and other members of the Commission.

7. The result of the examination is denoted as 'very good,' 'good,' 'sufficient,' 'insufficient,' or 'bad.' If the decision be 'insufficient' or 'bad,' the candidate must be again examined in the subjects in which he has failed. Botany and Zoology are counted together in estimating the result. The interval of time that must elapse before the candidate can be again examined varies from two to six months. It is fixed by the president, with the consent of the examiner.

8. The re-examination may take place in another University, if the candidate have matriculated therein.

9. Within two days after the end of each term of examination, the president must communicate to the University authorities the result of the examination. A certificate of the result as regards each subject is given to the candidate; and if he be rejected in any subject, the time which must elapse before re-examination is stated.

10. The fee for the examination and certificate is 36 marks. Doctors in Philosophy or Natural Science (*see* Section 5) pay only the fees of the president (5 marks) and of the member of the board by whom they are examined. At re-examination, the candidate has to pay the fees of the president and of the member by whom the examination is conducted.

UNIVERSITY OF BERLIN.*

The conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University in Berlin, are as follows.

1. Candidates must have studied medicine at least four years in one or more regularly constituted Universities. Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany. 2. Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion. 3. The candidate has to make application to the Dean, handing in at the same time the documents mentioned under 1 and 2. He has then to pass a written and verbal preliminary examination before the Dean, before being admitted to the *examen rigorosum*. The verbal examination is generally conducted in German or Latin, and extends to all branches of medicine. At the written examination, an *ex tempore* essay must be written, without any assistance, in a given time. 4. After the preliminary examination, the Dean lays before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination, and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. 5. The *examen rigorosum* takes place before six members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners questioning the candidate for a quarter of an hour. No branch of medicine and surgery is excluded. It is generally held in German, but, if necessary, in Latin. If a candidate be rejected, six months must elapse before re-admission. 6. After this, the candidate must present a German or Latin dissertation. The essay must be entirely original; and the candidate must declare on oath in writing that he has composed it entirely himself. If the manuscript be pronounced good by the Faculty, the candidate will have to get printed, at his own expense (about 85 *marks*), by a certain printer, a prescribed number of copies. It must consist of at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief *curriculum vitæ*, and at least three theses approved by the Dean. 7. After this, follows the public discussion in the Aula of the University. The discussion has reference both to the dissertation and to the theses. Next, the opponents chosen by the candidate, who must be at least three in number, divide on the subject. Their names must appear on the title-page of the dissertation. Afterwards, any one belonging to the University is at liberty to oppose. Both the candidates and the opponents must be dressed in black. The discussion is either in German or in Latin. The Minister of Education may allow the use of another language, and may also dispense with the discussion. 8. After the discussion is ended, the oath-taking and promotion of the can-

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* For much of the information in this and subsequent pages, we are indebted to Dr. Hardwicke's *Medical Education and Practice in all Parts of the World.*

didate as a Doctor of Medicine, Surgery, and Midwifery takes place. After the ceremony of promotion is completed, the Dean delivers the diploma to the newly created doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 *marks*) is borne by the candidate. A copy of it is fixed on the black board of the Faculty, and a certain number of copies are delivered to the Registrar of the University, for distribution. Promotion *in absentiâ* can on no account take place. 9. Four hundred and forty *reichs-marks* (22*l.*) must be paid to the Dean as fees for the Degree of Doctor in Medicine, of which 221 *marks* must be paid on application and are forfeited after the *examen rigorosum*, if the candidate be unsuccessful. The second portion (204 *marks* for the Faculty and 15 *marks* for the University library) may be paid either at the same time with the other, or within the period between the *examen rigorosum* and the promotion. In addition, the candidate has to pay expenses of printing the dissertation and diploma. 10. The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, the dissertation must be delivered ready for printing to the Dean at the first application, and the other business of the Faculty must be such as permits them to proceed at once to the examinations.

The Medical Faculty of this University consists of the following professors, with between forty and fifty *docents* or private teachers. *Ordinary Professors:* W. Waldeyer, Anatomy; A. Bardeleben, Surgery and Clinical Surgery; R. Virchow, Pathology; E. Du Bois-Reymond, Physiology; A. Hirsch, Medicine and History of Medicine; E. Leyden, Medicine and Clinical Medicine; C. Gerhardt, Medicine and Clinical Medicine; E. von Bergmann, Surgery and Clinical Surgery; C. Schröder and A. Gusserow, Obstetrics and Gynæcology; O. Liebreich, Materia Medica; C. Schweigger, Diseases of the Eye and Ophthalmic Clinic; C. Westphal, Psychology and Psychiatric Clinic; R. Koch, Hygiene. *Extraordinary Professors:* E. Henoch, Diseases of Children; E. Gurlt, Practical Surgery; C. Liman, Forensic Medicine; C. Skrzeczka, Hygiene and Medical Police; J. Meyer, Medicine; R. Hartmann, Anatomy; G. Lewin, Diseases of the Skin and Syphilis; H. Jacobson, Medicine; H. Munk, Physiology; C. A. Ewald, Medicine; A. Lucae, Aural Surgery; E. Salkowski, Chemistry; G. Fritsch, Physiology; O. Fräntzel, Medicine; H. Senator, Medicine; F. Busch, Surgery; H. Kronecker, Physiology; H. Fasbender, Gynæcology; H. L. Schöler, Ophthalmic Surgery; J. Hirschberg, Ophthalmic Surgery; E. Küster, Surgery; A. Christiani, Medical Physics; M. Bernhardt, Medicine; E. Sonnenburg, Surgery; E. Schweninger, Diseases of the Skin; J. Wolff, Surgery; E. Mendel, Diseases of the Nervous System. The following professors also give instruction in subjects connected with medicine in the Philosophical Faculty. *Ordinary Professors:* S. Schwendener, Botany; H. Helmholtz, Physics; A. W. Hofmann, Chemistry; F. E. Schulze, Zoology; A. W. Eichler, Botany; C. Rammelsberg, Chemistry.

The institutions for Clinical Teaching connected with the University are—the Institute for Clinical Surgery (Director, Dr. Von Bergmann); the Medical Polyclinic (Dr. Meyer); the Obstetric Clinic (Dr. Schröder); the Ophthalmic Clinic (Dr. Schweigger); the Aural Clinic (Dr. Lucae). In the Charité Hospital are the Medical Clinics (Dr. Leyden), the Surgical Clinic (Dr. Bardeleben), the Obstetric Clinic (Dr. Gusserow), the Gynæcological Clinic (Dr. Gusserow), the Clinics for Diseases of the Skin and Syphilis (Dr. Lewin), for Diseases of Children (Dr. Henoch), and for Diseases of the Mind and Nervous System (Dr. Westphal). The Pathological Institute is under the direction of Professor Virchow; The Physiological Laboratory under that of Professor Du Bois-Reymond; the Chemical Laboratory under that of Professor Hofmann; the Pharmaceutical Laboratory under that of Professor O. Liebreich; the Physical Institute under that of Dr. von Helmholtz; and the Hygienic Institute under that of Dr. R. Koch.

UNIVERSITY OF BONN.

A DEGREE in Medicine, Surgery, and Midwifery is granted only under the following conditions:

1. An examination in all branches of Medicine and Surgery of about three hours' duration in the German language; 2. A written scientific dissertation in German or Latin; 3. Public defence of the dissertation in German or Latin; 4. Fee for the examination and diploma, 360 *marks* (18*l.*), which must be paid prior to examination.

The following are the Professors in the Medical Faculty of this University. *Ordinary Professors:* C. Binz, Materia Medica; F. Trendelenburg, Surgery; C. Köster, Pathology; A. de la Valette St. George, Anatomy and Histology; F. von Leydig, Comparative Anatomy; E. Pflüger, Physiology; H. Rühle, Medicine; T. Sämisch, Diseases of the Eye; G. Veit, Obstetric Medicine and Gynæcology. *Extraordinary Professors:* C. Finkelnburg, Mental Diseases; J. Doutrelepont, Surgery; C. von Mosengeil, Surgery; H. Schaaffhausen, Physiology; M. Nussbaum, Anatomy and Histology; H. Walb, Diseases of the Eye and Ear; D. Finkler, Medicine; F. Fuchs, Medical Physics; H. Ribbert, Medicine and Pathology.

Connected with the University are medical, surgical, obstetric, and ophthalmic clinics; an anatomical theatre and museum, and physiological, pathological, pharmacological, physical, botanical, and chemical institutes.

UNIVERSITY OF BRESLAU.

THE following Professors belong to the Medical Faculty of this University. *Ordinary Professors:* A. Biermer, Medicine; E. Ponfick, Pathology; H. Fischer, Surgery; R. Förster, Ophthalmic Surgery; H. Häser, Materia Medica and Therapeutics; C. Hasse, Anatomy; R. P. H. Heidenhain, Physiology; H. Fritsch, Obstetrics and Gynæcology. *Extraordinary Professors:* L. Auerbach, Comparative Anatomy; H. Cohn, Ophthalmology; R. Gscheidlen, Physiology and Physiological Chemistry; I. Klopsch, Surgery; A. Neisser, Diseases of the Skin and Syphilis; E. Richter, Surgery; R. Voltolini, Diseases of the Ear; L. Hirt, Forensic Medicine and Hygiene; H. Sommerbrodt, Medicine; J. Gierke, Psychiatry; O. Soltmann, Diseases of Children; H. Magnus, Ophthalmology; G. Born, Anatomy; C. Wernicke.

The University possesses anatomical, physiological, pathological, pharmaceutical institutes, and clinics of medicine, surgery, obstetrics, ophthalmic surgery, syphilis and skin-diseases, and mental diseases.

UNIVERSITY OF ERLANGEN.

THE following are the regulations to be observed by candidates for the degree of Doctor of Medicine.

1. Candidates must announce their intention to the Dean of the Faculty of Medicine, and present: *a.* evidence of having gone through the curriculum in a German gymnasium, or proof of equivalent general education; *b.* proof of having studied medicine in one of the German Universities; or in a corresponding medical school abroad, during at least three years; *c.* a thesis, composed by the candidate, on some subject in medicine or natural science, with a written declaration, on word of honour, that the work is absolutely the candidate's own. 2. If the dissertation be judged to be of sufficient merit, the candidate is admitted to an oral examination, which is conducted in the German language. 3. After the conclusion of the oral examination, the examiners decide on the result. If the decision be favourable, the degree of Doctor is at once conferred. 4. The candidate, if his dissertation be approved, must have it printed at his own expense. 5. The candidate must pay a fee of 300 *marks* (equal to about 15*l.* 10*s.*) for the granting of the Doctor's degree, and must also deliver 150 copies of his dissertation to the Faculty. 6. If the candidate fail to pass the examination, half of the fee is returned to him.

The Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors:* J. von Gerlach, Anatomy; F. A. Zenker, Pathology and State Medicine; W. Heineke, Surgery; I. Rosenthal, Physiology; —— Practice of Medicine and Clinics; H. Sattler, Ophthalmology; P. Zweifel, Midwifery. *Extra-ordinary Professors:* F. W. Hagen, Psychological Medicine; W. Filehne, Materia Medica and Therapeutics; F. Penzoldt, Medicine; L. Gerlach, Anatomy.

In connection with the University are the following institutions: the University Hospital, with medical, surgical, obstetric, psychiatric, and ophthalmic clinics; an anatomical, a physiological, and a pathological institute.

UNIVERSITY OF FREIBURG.

THE Faculty of Medicine grants a degree in Medicine, Surgery, and Midwifery. The following are the conditions to be observed.

1. A certificate must be produced showing the respectability of the candidate, and also the amount of his education, both prior to and since his admission as a medical student. 2. A scientific dissertation must be written in German or Latin. 3. A fee of 300 *marks* (15*l.*) must be paid. In case of rejection, the candidate will receive half the fee; and when he presents himself for examination again, he pays only that amount—viz., 150 *marks.* Should these conditions be complied with, and the thesis be deemed satisfactory, the candidate is admitted to a *vivâ voce* examination, conducted in German, on the following subjects: Anatomy, Materia Medica and Toxicology, Physiology, Medicine, Surgery, Pathological Anatomy, Midwifery, and Ophthalmology. If a candidate have already passed an examination as Physician before a German Commission of Examiners, the number of subjects may be reduced. If the examination be passed, one of the following grades of honour is conferred: (1) *Summâ cum laude;* (2) *Insigni cum laude;* (3) *Cum laude.*

The Medical Faculty of the University is thus constituted. *Ordinary Professors:* A. Ecker, Human and Comparative Anatomy; R. Maier, Pathological Anatomy and State Medicine; A. Hegar, Midwifery; F. Hildebrand, Botany; W. Manz, Ophthalmic Surgery; Ch. Bäumler, Medicine; F. F. L. Thomas, Materia Medica and Medicine; P. Kraske, Surgery; E. Baumann, Physiological Chemistry; R. Wiedersheim, Anatomy; J. von Kries, Physiology. *Extra-ordinary Professors:* A. Schinzinger, Surgery; L. Kirn, Psychiatry; J. Strasser, Anatomy; M. Schottelius, Pathology; W. Hack, Syphilis and Diseases of the Skin; J. von Rotteck.

The University Library contains 250,000 volumes. There are a chemical laboratory and institutions for the practical study of anatomy, pathology, physiology, &c., and medical, surgical, obstetric, and ophthalmic clinics.

UNIVERSITY OF GIESSEN.

THE Faculty of Medicine grants a degree in Medicine, Surgery, and Obstetrics, which can only be obtained on the following conditions.

1. A *curriculum vitæ*, written by himself, must be sent to the Faculty by the candidate; also a certificate of gymnasial maturity, and a certificate of at least three years' medical and surgical study at an university or a medical institution. If the candidate be not a native of Germany, he must produce a certificate of sufficient preliminary studies from his own country. 2. The candidate must present a dissertation on some medical subject, written in German or Latin, together with a declaration in his own handwriting that the dissertation is his own composition; or a previously published treatise or literary production may be substituted. 3. The whole of the documents are laid before the Rector and the Chancellor. 4. If no objection be made, and the candidate have paid the promotion fees, the dissertation is judged by a referee; and, if he declare the work to be satisfactory, the candidate is admitted to *vivâ voce* examination. 5. This examination takes place in the German language, and lasts two or three hours. It is held in public, except when the candidate is advanced in age, or in a few other cases. 6. The examination embraces Anatomy, Physiology, Pathological Anatomy, Histology, Pathology, and Medicine, Materia Medica and Therapeutics (including Toxicology), Surgical Pathology and Surgery, Forensic Medicine, and Obstetrics. 7. Immediately after the conclusion of the examination, the result is decided on by the President and examiners, and at once made known to the candidate. The examination is not passed, when two or more members of the Faculty declare the result to have been unsatisfactory. The degree is granted either *cum laude*, *magnâ cum laude*, or *summâ cum laude.* 8. The approved dissertation must be printed and published, and the appointed number be presented to the Faculty before the promotion takes place; except when the candidate has already handed in a printed treatise. 9. Promotions to M.D. *in absentiâ* do not take place at this University, except in the case of degrees granted *honoris causâ*, by the unanimous decision of the Faculty, to men who have rendered some great service to the

science of medicine. 10. The fee for promotion is 440 *marks* (22*l.*), which must be paid at the time of the petition for admission. If the candidate be not admitted to the verbal examination, 100 *marks* are retained. If the verbal examination be not passed, half the fees are forfeited; but, if the candidate present himself again, he has only to pay half the fees.

The following are the professors in the Faculty of Medicine in the University. *Ordinary Professors:* H. Bose, Surgery; J. Wilbrand, Forensic Medicine and Hygiene; C. Eckhard, Physiology; F. Riegel, Medicine; R. Kaltenbach, Obstetrics and Gynæcology; G. Pflug, Veterinary Medicine; F. W. von Hippel, Ophthalmic Surgery; C. Gæhtgens, Materia Medica; E. Boström, Pathological Anatomy; *Extraordinary Professors:* F. Birnbaum, Obstetrics; F. Eichbaum, Histology and Veterinary Medicine; Dr. L. Winckler teaches Veterinary Medicine.

The University Library contains 140,000 volumes. There are an academical hospital, with medical, surgical, and ophthalmic clinics, a lying-in institution, a chemical laboratory, a physiological, a pathological, and a pharmacological institute.

UNIVERSITY OF GŒTTINGEN.

A DEGREE in Medicine, Surgery, and Obstetrics is granted under the following conditions.

1. A written essay must be sent in on any medical subject chosen by the candidate. 2. If the essay be satisfactory, the student is admitted to a *vivâ voce* examination, which lasts a few hours, and is held in German or Latin, at the option of the candidate. 3. A fee of 439 *marks* (21*l.* 19*s.*) must be paid to the Medical Faculty prior to examination. 4. The subjects of examination are Anatomy and Morbid Anatomy, Physiology, Pharmacology, General Pathology and Medicine, Surgical Pathology and Surgery, Toxicology, Medical Jurisprudence, and Obstetrics. If the candidate be successful, he receives a diploma, and promises to hold his academical honour with dignity.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors:* F. S. Merkel, Anatomy; F. Wöhler, Chemistry; G. Meissner, Physiology; H. Schwartz, Midwifery and Diseases of Women; L. Meyer, Psychological Medicine; Th. Leber, Ophthalmic Surgery; W. Ebstein, Medicine; W. Marmé, Materia Medica; F. König, Surgery; J. Orth, Pathology; C. Flügge, Physiology. *Extraordinary Professors:* C. F. Lohmeyer, Surgery; J. Rosenbach, Surgery; W. Krause, Physiology; E. F. W. Herbst, Physiology; T. Husemann, Materia Medica and Toxicology; R. Deutschmann, Ophthalmic Surgery; O. Damsch, Medicine; K. Bürkner, Diseases of the Ear.

The following institutions are connected with the Medical Faculty: institutions for teaching animal and vegetable physiology and pharmacology, and pathology; the Ernst-August Hospital, with medical, surgical, and ophthalmic clinics; a lying-in hospital; a psychiatric clinic in the Lunatic Asylum; a chemical laboratory; and a veterinary institute.

UNIVERSITY OF GREIFSWALD.

THE Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors:* J. Budge, Anatomy and Physiology; H. C. A. Pernice, Midwifery and Diseases of Women; F. Grohé, Pathological Anatomy; F. Mosler, Medicine; ———, Surgery; L. Landois, Physiology; R. Schirmer, Ophthalmic Surgery; H. Schulz, Materia Medica; F. Sommer, Anatomy. *Extraordinary Professors:* C. Eichstedt, Midwifery, Diseases of the Skin, and Syphilis; W. Häckermann, Forensic Medicine and Hygiene; R. Arndt, Psychology and Nervous Diseases; P. Krabler, Diseases of Children; F. Rinne, Surgery; the Baron von Preuschen von Liebenstein, Midwifery and Diseases of Women; A. Budge, Anatomy.

The University Hospital contains medical, surgical, ophthalmic, and obstetric clinics.

UNIVERSITY OF HALLE.

THE following are the regulations for the medical degree.

1. Application for admission to examination must be made to the Dean, and at the same time must be presented:—(*a*) *curriculum vitæ*; (*b*) certificate of maturity from a gymnasium; (*c*) certificate of having passed a *tentamen physicum* at least two years previously; (*d*) certificates of having passed, in Universities, at least eight medical scholastic half years. 2. On making application, 360 *marks* must be paid to the Dean for the examinations and the promotion, besides which, 12 *marks* must be paid before the promotion to the Secretary of the University. 3. The examinations are held on two consecutive days, by the regular professors of the Faculty. 4. After passing his examination, the candidate must compose a treatise on some subject in medical science, and deliver it to the Dean, together with theses to be publicly discussed, and the *curriculum vitæ*, for examination and approval; the same when printed (which must be done at the candidate's expense) must fill at least two quires. 5. The candidate has to request all the examiners personally to be present at the examination, likewise the members of the Faculty. 6. The candidate defends his treatise and the theses against two previously appointed opponents; after which, those present are also called upon to join in the discussion. After the discussion is ended, the doctoral oath is administered, and the diploma delivered to the candidate. 7. Whoever fails to pass the examination, which includes all branches of medicine and surgery, receives back from the fees paid (40¼ *marks*). 8. The time for taking the degree is left to the candidate. He must not, however, exceed one year from the time of passing the examination to the taking of the degree, else he will have to submit to re-examination, and must pay again all the fees.

The following professors, with several private teachers, constitute the Medical Faculty of this University. *Ordinary Professors:* L. Krahmer, Materia Medica and Forensic Medicine; Th. Weber, Medicine; R. Olshausen, Obstetrics and Gynæcology; Th. Ackermann, Pathology; H. Welcker, Anatomy; R. Volkmann, Surgery; J. Bernstein, Physiology; A. Gräfe, Ophthalmic Surgery; E. Hitzig, Psychological Medicine; K. J. Eberth, Histology. *Extraordinary Professors:* H. Schwartze, Diseases of the Ear; E. Kohlschütter, Medicine; E. Harnack, Animal Chemistry and Biology; B. Solger, Anatomy; A. Seeligmüller, Diseases of the Nervous System; R. Pott, Diseases of the Skin; A. Genzmer, Surgery; B. Küssner, Medicine; M. Oberst.

The University library contains 100,000 volumes.

Connected with the University are a chemical laboratory, a botanical garden, a zoological museum, an anatomical theatre and zootomical museum, a lying-in institution, a medico-chirurgical hospital, and physiological, pathological, and pharmaceutical laboratories.

UNIVERSITY OF HEIDELBERG.

THE following are the regulations to be observed for graduation in medicine in this University.

1. No evidence of previous study is required. 2. The same demands are made of all candidates; the only difference is that the oral examination is shortened, if evidence be produced that the candidate has undergone the German *Staats-examen*. 3. The subjects of examination are Anatomy, Physiology, Pathological Anatomy, Materia Medica (Pharmacognostics, Pharmacodynamics, and Toxicology), Medicine, Surgery, Midwifery, and Ophthalmic Surgery. 4. A candidate may select one of these as the principal subject of examination. All the other subjects then become secondary. 5. The examination is oral and written. The oral examination is conducted in the German language. 6. The written part of the examination consists of a medical dissertation in German or in Latin, or a scientific publication by the candidate, which must be given in before the oral examination. 7. The oral examination comprises the principal subject chosen by the candidate, and a certain number of the secondary subjects. If a state-examination have been passed in the German Empire, the candidate is examined in the principal subject, and in three of the secondary subjects, selected by himself; otherwise, he is examined in five secondary subjects. Of these, three are fixed—Anatomy, Physiology, and Pathological Anatomy; the other two may be chosen by the candidate. 8. The candidate is examined on the principal subject for thirty minutes, on each secondary one for fifteen or twenty minutes. 9. On the result of the entire examination, three notes are granted: *summâ cum laude, insigni cum laude, cum laude*. 10. When the diploma is delivered to the candidate by the Dean, he has to give his hand in promise that he will bear his academical dignity with honour. 11. The cost of the examination, exclusive of that of the diploma, amounts in all to 444 *marks* (about 22*l.* 5*s.*), which must be paid before the commencement of the examination. Of this sum if the oral examination be not passed, 179 *marks* (about 9*l.*) are returned.

The Medical Faculty consist of the following professors, with several teachers. *Ordinary Professors:* F. Kehrer, Midwifery; W. Delffs, Chemistry; C. Gegenbaur, Human and Comparative Anatomy; W. Kühne, Physiology; O. Becker, Ophthalmic Surgery; Th. von Dusch, Medicine; W. Erb, Medicine; J. Arnold, Pathology; V. Czerny, Surgery; C. Fürstner, Psychological Medicine. *Honorary Professor:* A. Nuhn, Human and Comparative Anatomy. *Extraordinary Professors:* H. Oppenheimer, Materia Medica; S. Moos, Diseases of the Ears; F. Knauff, Forensic Medicine and Hygiene; H. Lossen, Surgery; A. Weil, Medicine and Diseases of the Skin, and Syphilis; F. Schultze, Diseases of the Nervous System; A. Jurasz, Diseases of the Throat; G. Ruge, Anatomy; A. Ewald, Histology.

In connection with the University are a hospital, with medical, surgical, and ophthalmic clinics, an institution for diseases of the ear, a lying-in institution, anatomical, pathological, physiological, and zoological institutes, two chemical laboratories, and a botanical garden.

UNIVERSITY OF JENA.

THE Faculty of Medicine of this University grants a degree in Medicine, Surgery, and Obstetrics, the conditions for which are as follow.

1. A certificate must be given as to the extent of medical studies, and the period of time which has elapsed since their completion (at least six terms). 2. Satisfactory evidence must be given as to character, from the neighbouring head office of police. 3. Payment of examination and promotion fees must be made to the amount of 141 *thalers* (about 22*l.*) If the examination be not passed, the promotion fees and 52 *thalers* are returned. The examination is held in the German language only. It comprises all branches of medicine—viz., Anatomy, Physiology, Histology, General Pathology, Pathological Anatomy, Special Pathology, Medicine, Therapeutics, Surgery, Obstetrics, &c. When the examination is passed, the student has to give in a written essay on any subject of medical science, chosen by himself, written in German or in Latin. A dispensation from the Latin or German disputation may be granted, when the examination is very satisfactorily passed. After the essay is printed, and when the public disputation is over, the making out of the medical diploma takes place.

The Medical Faculty of this University is constituted as follows. *Ordinary Professors:* F. Ried, Surgery; H. Braun, Surgery; B. Schultze, Obstetrics; W. Müller, Pathology; W. Preyer, Physiology; O. Hertwig, Anatomy; M. J. Rossbach, Medicine; H. Kuhnt, Ophthalmology. *Honorary Professor:* M. Siedel, Materia Medica. *Extraordinary Professors:* P. Schillbach, Diseases of the Eye and Ear; C. Frommann, Physiology and Histology; C. Bardeleben, Anatomy; F. Weber-Liel, Diseases of the Ear; P. Fürbringer, Diseases of the Skin and Syphilis; O. Küstner, Obstetrics and Gynæcology; O. Binswanger, Psychiatry; F. Krukenberg, Medical Chemistry.

Connected with the University are the Grand-Ducal hospital, lying-in institution, and lunatic asylum; anatomical, zoological, physiological, pathological, and chemical laboratories and museums, &c.

UNIVERSITY OF KIEL.

THE following are the conditions for obtaining the medical degree: 1. The presentation, on application, of (*a*) *curriculum vitæ*; (*b*) certificate of medical studies; (*c*) a scientific treatise; 2. a written examination; 3. a verbal examination before the Faculty; 4. payment of 360 *marks*.

In this University the Medical Faculty consists of the following professors, with five private teachers. *Ordinary Professors:* C. C. T. Litzmann, Obstetrics and Gynæcology; F. Esmarch, Surgery; H. Quincke, Medicine; V. Hensen, Physiology; A. Heller, Pathology; C. Völckers, Diseases of the Eye; W. Flemming, Anatomy. *Extraordinary Professors:* J. Bockendahl, Forensic Medicine; G. J. F. Edlefsen, Medicine; F. Petersen, Surgery; A. Pansch, Anatomy; F. A. Falck, Materia Medica; R. Werth, Obstetrics and Gynæcology.

There are a medico-chirurgical hospital, containing medical, surgical, and ophthalmic clinics, a lying-in institution, and laboratories and museum in connection with the several subjects taught.

UNIVERSITY OF KŒNIGSBERG.

THE Medical Faculty of this University consists of the following professors, with several private teachers. *Ordinary Professors:* L. Hermann, Physiology; R. Dohrn, Obstetrics and Gyæcology; L. Stieda, Anatomy; E. Neumann, Pathology; C. Schönborn, Surgery; B. Naunyn, Medicine; J. Jacobson, Ophthalmic Surgery; M. Jaffe, Medical Chemistry. *Extraordinary Professors:* H. Bohn, Diseases of the Skin; A. W. Grünhagen, Histology; S. Samuel, Therapeutics; S. Pincus, Forensic Medicine; E. Berthold, Diseases of the Eye and Ear; F. R. A. Schneider, Surgery and Military Surgery; B. A. Benecke, Anatomy; E. Burow, Surgery; J. Caspary, Diseases of the Skin and Syphilis; P. Baumgarten, Pathology; J. Schreiber, Medicine; O. Langendorff, Physiology.

Connected with the University are anatomical, pathological, and physiological institutions, medical, surgical, obstetrical, and ophthalmic clinics; chemical and pharmaceutical laboratories, &c.

UNIVERSITY OF LEIPZIG.

THE Medical Faculty of this University consists of the following professors and a number of private teachers. *Ordinary Professors:* F. Hofmann, Hygiene; E. L. Wagner, Medicine; C. S. F. Credé, Midwifery; F. V. Birch-Hirschfeld, Pathological Anatomy; C. F. W. Ludwig, Physiology; C. Thiersch, Surgery; E. A. Coccius, Ophthalmic Surgery; W. His, Anatomy; C. W. Braune, Anatomy; P. Flechsig, Psychiatry; R. Boehm, Materia Medica. *Extraordinary Professors:* H. Sonnenkalb, Forensic Medicine and Hygiene; J. V. Carus, Zoology and Comparative Anatomy; A. Winter, Materia Medica; C. Hennig, Obstetrics; C. H. Reclam, Forensic Medicine and Hygiene; B. G. Schmidt, Surgery; E. F. Wenzel, Anatomy and Histology; J. O. L. Heubner, Medicine; E. R. Hagen, Otology, &c.; A. R. Brenner, Diseases of the Nervous System; E. Drechsel, Medical Chemistry; A. Strümpell, Medicine; A. Rauber, Anatomy; F. L. Hesse, Dental Surgery.

In connection with the University are chemical, physico-chemical, and pathologico-chemical laboratories; a zoological institute, under the direction of Professor Leuckhardt; an anatomical institute, under Professor His; a physiological institute, under Professor Ludwig; and various clinics, &c.

UNIVERSITY OF MARBURG.

ANY one wishing to proceed to the medical degree at this University must send in to the Dean of the Faculty of Medicine the following: 1. *a curriculum vitæ*; 2, a certificate of scientific studies; 3, a certificate of at least four years' study at a recognised University or Medical College; 4, a dissertation in the German language. If these be considered satisfactory, the candidate is admitted to a *vivâ voce* examination in the German language. If the examination be satisfactorily passed, the dissertation must be printed at the candidate's expense, and publicly defended. Three or four printed theses must also be sent in. The cost for the diploma is 330 *marks* (16*l.* 10*s.*).

The following are the professors in the Medical Faculty of this University. *Ordinary Professors:* H. Nasse, Physiology; W. Roser, Surgery; P. Ahlfeld, Midwifery; N. Lieberkühn, Anatomy; F. Marchand, Pathology; E. Mannkopff, Medicine; H. Schmidt-Rimpler, Ophthalmology; H. Kramer, Psychology; E. E. Külz, Physiology; H. Meyer, Pharmacology. *Extraordinary Professors:* G. Wagener, Anatomy; H. Lahs, Midwifery; M. Rubner, Hygiene.

A hospital and various laboratories, &c., for practical instruction are connected with the University.

UNIVERSITY OF MUNICH.

IN granting medical degrees at this University, a distinction is made between those candidates who have already passed a State Examination, and those who have not. From candidates who have already passed a satisfactory German examination, nothing further is required in order to admit them to compete for the doctorate than the certificate of having passed such examination. The Faculty requires, however, the presentation of a dissertation, written in either the Latin or the German language. If the Faculty approve of it, it is printed at the expense of the candidate.

1. Candidates who have not passed the German State examination must present to the Medical Faculty the following:—*a*, a gymnasial certificate, or at least a certificate showing that the candidate has enjoyed a regular education; *b*, certificates of at least four years' attendance at an university or medical institution, and of attendance at lectures on the principal branches of natural science and medicine; *c*, clinical certificates of the treatment of an internal, surgical, and eye complaint, and also assistance at a birth; *d*, a certificate of the performance of an operation on the dead body, and the application of a bandage. 2. The candidate must pass a two hours' verbal examination (in the German language) in Anatomy, Physiology, General Pathology and Pathological Anatomy, Materia Medica, Therapeutics, Surgery, Midwifery, Hygiene, and Diseases of the Eye. 3. The candidate has also to give in a dissertation. 4. The fees for examination and promotion amount, for both kinds of candidates, to 100 *thalers*, 300 *marks*, or 175 *florins* (15*l.*).

The professorial staff of the Medical Faculty of this University is constituted as follows:—*Ordinary Professors:* F. X. von Gietl, Medicine; F. C. von Rothmund, Surgery and Clinical Surgery; A. Weismann, Zoology and Comparative Anatomy; F. Seitz, Materia Medica; L. A. Buchner, Pharmacy; M. von Pettenkofer, Hygiene; F. C. L. Winckel, Obstetrics and Gynæcology; J. N. von Nussbaum, Surgery and Clinical Surgery; A von Rothmund, Ophthalmic Surgery; C. von Voit, Physiology; H. von Ziemssen, Medicine; B. von Gudden, Psychology; C. Kupffer, Anatomy; N. Rüdinger, Anatomy; O. Bollinger, Pathology. *Extraordinary Professors:* H. Ranke, Medicine; J. Amann, Midwifery; A. Martin, Forensic Medicine; J. Oertel, Laryngoscopy; J. Bauer, Medicine; H. Helferich, Surgery; H. Tappeiner, Medical Chemistry.

The University, which is situated in the Ludwigstrasse, contains a library consisting of 500,000 volumes. The chemical laboratory for hygiene is under the direction of Professor von Pettenkofer.

UNIVERSITY OF ROSTOCK.

Whoever wishes to graduate in medicine at this University must apply to the Dean of the Medical Faculty, and deliver to him the following documents: 1, a certificate of having gone through the requisite course of studies in an university; 2, a certificate of examination, testifying to the ability of the candidate in the practice of medicine; 3, a treatise on any subject appertaining to medical science, composed by the candidate himself. A fee of 350 *marks* must be paid to the Faculty, of which two-thirds will be returned if the treatise be not deemed satisfactory. If proof of having passed a satisfactory examination in Germany be not given, the candidate is subjected to an examination, for which a sum of 200 *marks* must be paid. Only for special cases does the Faculty reserve a special form of examination. The inaugural dissertation must be the candidate's own, and he must append a written declaration to that effect. It is not, however, required that the work be composed entirely without assistance; but in this case the resources must be distinctly stated. After the dissertation has been stamped by the Dean in the name of the Faculty, it must be printed at the expense of the author, and at least 125 copies delivered to the Faculty. When the candidate has satisfactorily fulfilled the above conditions, he must introduce his essay, and read it publicly, and defend it. Promotions *in absentiâ* cannot be made, except only in the case of a *promotio honoris causâ* for distinguished service to medical science.

The Medical Faculty of this University consists of the following *Ordinary Professors:* T. Thierfelder, Medicine; H. R. Aubert, Physiology; W. von Zehender, Ophthalmology; F. Schatz, Obstetrics and Gynæcology; A. von Brunn, Anatomy; O. Nasse, Pharmacology; O. W. Madelung, Surgery; A. Thierfelder, Pathological Anatomy. *Extraordinary Professors:* J. Uffelmann, Medicine; F. Neelsen, Pathology.

UNIVERSITY OF STRASBURG.

The following is an extract from the regulations of the University of Strasburg relative to Degrees in Medicine.

Any person desirous of obtaining the degree of Doctor of Medicine can only be admitted to graduation on fulfilling the following conditions. 1. If he belong to the German Empire, he must have completed an academical four years' course of study of Medicine, or of the Natural Sciences. By an unanimous decision of the Faculty, one or two sessions may be omitted. Foreigners are not required to have passed through the four years' course, if they produce proof of having received instruction equivalent to the course of study in a German Medical Faculty. 2. He must present a scientific essay composed by himself. 3. He must undergo the Faculty examination. 4. He must pay the prescribed fee of 240 *marks*. The examination consists, as a rule, of an oral examination in all important departments of medicine. If the candidate fail to give satisfaction, he must, in order to obtain the degree of doctor, again undergo the examination after a time to be determined by the Faculty, but he is not required to present a second dissertation. In the case of candidates who have passed the State examination, a colloquy before three members of the Faculty may be substituted for the oral examination. Degrees in Medicine are not conferred on absent candidates. If the dissertation be rejected, the whole fee is returned. If the dissertation be approved, but the candidate fail in the examination, 90 marks are returned to him: but when he is again admitted to examination, only half that fee is required. After the examination has taken place, and the dissertation has been printed and published, the candidate is formally admitted to the degree of Doctor by the issuing of a printed diploma. The candidate has to bear the expense of printing the dissertation and the diploma. There is no public ceremony, and no oath is administered.

Any one desirous of matriculating as a student, and attending the lectures and other instruction given in the University, must, on his arrival in Strasburg, communicate with the Secretary of the University in order to be inscribed. Other persons desirous of attending the lectures must obtain permission from the respective teachers, and must then communicate with the Secretary of the University.

The following are the professors and teachers of the University. *Ordinary Professors:* G. Schwalbe, Anatomy; J. G. Jössel, Anatomy; F. L. Goltz, Physiology; F. Hoppe-Seyler, Physiological and Pathological Chemistry; O. Schmiedeberg, Pharmacology and Therapeutics; F. von Recklinghausen, Pathological Anatomy and Physiology; A. Kussmaul, Medicine; A. Lücke, Surgery; W. A. Freund, Obstetrics and Gynæcology; F. Wieger, Diseases of the Skin, and Syphilis; A. Aubenas, Obstetrics and Gynæcology; F. Jolly, Psychiatry; L. Laqueur, Diseases of the Eye. *Extraordinary Professors:* G. Kohts, Medicine and Diseases of Children; A. Kuhn, Diseases of the Ear; E. Fischer, Surgery; J. Stilling, Ophthalmology. There are also several *docents*.

Connected with the University are institutions for the practical study of anatomy, experimental physiology, physiological chemistry, pathology, and pharmacology, and clinics for medicine, surgery, midwifery, mental diseases, diseases of the eye, and syphilis, and diseases of the skin.

UNIVERSITY OF TÜBINGEN.

The Faculty of Medicine here grants a degree in Medicine under the following conditions.

1. The candidate must send in with his application—*a*, a *curriculum vitæ; b*, a certificate of having gone through a thorough course of instruction at the Gymnasium or some equivalent institution; *c*, proof of a sufficient study of medicine at a university, and certificates of having attended the lectures having reference to the subjects of examination. 2. The examination consists of a written and a subsequent verbal one. A legalised proof of having passed a satisfactory examination in medicine and surgery in a foreign country dispenses with the written examination, but not with the verbal one. In no case can a degree be granted *in absentiâ*. 3. In the written examination will be put one question in each of the following subjects: 1. Anatomy; 2. Physiology; 3. Materia Medica; 4. General Pathology and Therapeutics; 5. Two questions in Special Pathology and Therapeutics. In addition to these, if a Doctor's degree in Surgery be required, one question will be put on each of the following subjects: 1. General Surgery; 2. Special Surgery; 3. Surgical Operations; 4. Midwifery.

5. The fees amount to 300 *marks*, including the printing of the diploma, which fee must be paid on application. If the candidate be rejected at the written examination, and be not admitted to the verbal one, the whole of the fees are returned. If he be rejected after the verbal one, only half is returned. 6. The candidate must compose a dissertation, and get it printed; 250 copies are to be presented to the University. If, however, the essay be published either in a periodical or as a special pamphlet, 100 copies will suffice, but they must be provided with a special title-page. Only such candidates as have given numerous and satisfactory literary proofs of their capacity can be allowed to dispense with the composition.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors* : P. Bruns, Surgery; P. Grützner, Physiology; J. von Säxinger, Obstetrics and Gynæcology; C. von Liebermeister, Medicine; T. von Jürgensen, Materia Medica; A. Nagel, Ophthalmology; P. J. W. Henke, Anatomy; E. Ziegler, Pathology. *Extraordinary Professors* : O. Oesterlen, Forensic Medicine and Hygiene; A. Froriep, Anatomy; G. Schleich, Ophthalmology; H. Vierordt, Medicine.

A hospital and institutions for practical instruction are connected with this University.

UNIVERSITY OF WÜRZBURG.

Before being admitted to the examination for the Doctorate of Medicine, Surgery, and Midwifery, the candidate must show—by testimonials or certificates—that he has a good moral character, and that he has passed through four years' study at an University, six sessions of which must have been devoted to medical studies. Upon fulfilment of these conditions, the candidate is admitted to a written and *vivâ voce* examination; before which he must pay to the Faculty 300 *marks* (£15). The written examination consists in the composition of an essay on some subject in theoretical or practical medicine, which dissertation must be handed to the Dean. It is customary for the dissertation to be printed. If the report on the essay be unfavourable, admission to the *vivâ voce* examination is denied, and another essay must be composed and handed in at a future time. Should the second essay, however, be deemed unsatisfactory, the candidate will not be allowed to reappear. He then receives back all his fees except 30 *marks*. If the dissertation be approved by the Faculty, the candidate is admitted to a *vivâ voce* examination, in the German language, which consists of the following subjects: Anatomy and Pathological Anatomy, Physiology, Pathology and Medicine, Special Therapeutics, Surgery, Obstetrics and Ophthalmology. A knowledge also of Psychology and State Medicine is required. After taking the examination oath, the result and standing of the examination is imparted to the candidate by the Dean—whether very good, good, or moderate. When the candidate is unsuccessful at the *vivâ voce* examination, he receives back half the fees, and is allowed to present himself for examination again in six months' time by paying half the fees again. Only one more attempt is, however, allowed after the first rejection at the *vivâ voce* examination. After successful examination, the candidate receives his diploma of doctor.

In this University, the Medical Faculty consists of the following professors, with several *docents*. *Ordinary Professors:* A von Kölliker, Anatomy; F. W. Scanzoni von Lichtenfels, Midwifery; H. Maas, Surgery and Clinical Surgery; A. Fick, Physiology; W. O. Leube, Medicine; G. E. Rindfleisch, Pathology; J. Michel, Ophthalmic Surgery; A. Geigel, Medicine and Hygiene; H. Grashey, Psychiatry. *Extraordinary Professors:* A. von Tröltsch, Aural Surgery; W. Reubold, Forensic Medicine; A. Kunkel, Materia Medica; P. Stöhr, Anatomy; F. Riedinger, Surgery.

AUSTRO-HUNGARIAN EMPIRE.

GRADUATION IN MEDICINE.

The Universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are: Agram (Croatia), Gratz (Styria), Innsbrück (Tyrol), Cracow, Lemberg (Galicia), Pesth (Hungary), Prague (Bohemia), and Vienna.

All the Universities are under Government control, and the degree of Doctor of Medicine obtained at any of them alone gives the right to practise medicine in the empire.

The course of study required of candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire extends over five years, or five winter and five summer terms or *semesters*. The following arrangement is recommended by the Government. (The first, third, fifth, seventh, and ninth are winter *semesters:* the others are summer *semesters*.) 1st *Semester:* Systematic Anatomy; Experimental Physics, Inorganic Chemistry; General Botany; Dissections. 2nd *Semester:* Systematic Anatomy (second part); Experimental Physics (second part); Organic Chemistry; Special Botany; Mineralogy; Practical Introduction to Chemical Analysis; Practical Introduction to the Use of the Microscope. 3rd *Semester:* Physiology; Histology; Medical Chemistry; Zoology; Dissections. 4th *Semester:* Physiology (second part); Embryology; Exercises in Physiology; in Histology; and in Medical Chemistry. 5th *Semester:* General Pathology and Therapeutics; Pharmacology; Pathological Anatomy; Pathological Histology; *Post mortem* Examinations; Practical Introduction to the Physical Examination of Patients. 6th *Semester:* Pathological Anatomy (second part); Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; *Post mortem* Examinations; Exercises in Pathological Histology. 7th *Semester:* Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; Diseases of the Eye; Exercises in Surgical Anatomy; (Operations). 8th *Semester:* Internal Diseases; Surgery or Diseases of the Eye; Surgical Operations; (Surgical Anatomy). 9th *Semester:* Internal Diseases; Surgery; Theory and Practice of Obstetrics and Gynæcology; Forensic Medicine; (Exercises in Obstetric Operations); Medico-Legal Exercises. 10th *Semester:* Clinics of Diseases of Children; of Diseases of the Skin; and of Syphilis; (Obstetrics and Gynæcology); Exercises in Obstetric Operations; (Medico-Legal Exercises). Of the subjects included in brackets, one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

Candidates for the degree of Doctor of Medicine are required to undergo three examinations (*rigorosen*). Before being admitted, the candidate must produce (*a*) his certificate of birth or baptism, and evidence (*b*) of having received a sufficient preliminary education in one of the institutions of the countries comprised in the empire, or, if he do not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine ; (*c*) evidence of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions ; (*d*) of having passed, at one of the Universities of the empire, three examinations, in Botany, Zoology, and Mineralogy. Before being admitted to the second examination, he must produce evidence of having been engaged five years in professional study, and of having studied Clinical Medicine and Clinical Surgery, each during four sessions, and Clinical Ophthalmology and Clinical Midwifery, each during at least one session ; and of having passed the first examination.

The first examination embraces Physics, Chemistry, Anatomy, and Physiology. There is a practical examination on Anatomy and Physiology, and a theoretical examination on all four subjects.

The second examination includes General Pathology and Therapeutics, Pathological Anatomy and Histology, Pharmacology (pharmacodynamics, toxicology, and prescribing), and the Pathology and Therapeutics of internal diseases. The candidate is examined practically in Pathological Anatomy (with preparations and on the dead body), and in Medicine (at the bedside) ; and theoretically in all the subjects.

The third examination embraces Surgery, Ophthalmic Surgery, Midwifery and Diseases of Women, and Forensic Medicine. The examinations in Surgery, Ophthalmic Surgery, and Midwifery, are practical ; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same University. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another University than that at which he has passed the first.

The examinations are public, and are conducted by a president, the regular examiners, extraordinary examiners when required by the number of candidates, the Government commissioner ; and at the second and third there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

A candidate is not admitted to the theoretical examination unless he has satisfied the examiners in the practical one. If he fail at the practical examination, he may present himself again at the end of six months ; if again rejected, six months must elapse before he can be again examined. A candidate rejected at the theoretical examination by one examiner only may be re-admitted to examination in the subject in which he is deficient, at the end of two months. If again rejected, he cannot be again examined in less than four months. If rejected at the theoretical examination by more than one examiner, he may re-appear a second and third time at intervals of six months. A rejected candidate can, however, be examined a third time, either in practice or in theory, only with the sanction of the Minister of Public Instruction, and the consent of the College of Professors ; and if he then fail, he is debarred henceforth from obtaining a degree in medicine in any of the Universities of the empire.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total fee for the M.D. degree is about £23 of English money.

UNIVERSITY OF VIENNA.

In this University, the Medical Faculty is constituted as follows. *Ordinary Professors :* E. von Brücke, Physiology ; E. Albert, Surgery ; C. Langer, Anatomy ; C. R. Braun von Fernwald, Obstetrics and Gynæcology ; H. von Bamberger, Medicine ; H. Kundrat, Pathology ; H. Nothnagel, Medicine ; J. Späth, Obstetrics and Gynæcology ; C. Stellwag von Carion, Ophthalmic Surgery ; Th. Billroth, Surgery ; G. Braun, Midwifery (for Midwives) ; E. Hofmann, Forensic Medicine ; I. Neumann, Syphilology ; S. Stricker, Pathology and Therapeutics ; T. Meynert, Psychiatry and Nervous Diseases ; A. E. Vogl, Pharmacology and Pharmacognosy ; E. Ludwig, Chemistry ; K. Toldt, Anatomy ; H. Widerhofer, Diseases of Children ; — Fuchs, Ophthalmic Surgery. *Extraordinary Professors :* J. Seegen, Balneology ; L. Schlager, Psychiatry ; F. Müller, Veterinary Medicine ; L. Dittel, Surgery ; M. Leidesdorf, Psychiatry ; M. Benedikt, Electro-Therapeutics and Neuro-Pathology ; S. Stern, Elementary Clinical Instruction ; A. Politzer, Aural Surgery ; J. Grüber, Aural Surgery ; J. Weinlechner, Surgery ; S. L. Schenk, Embryology ; A. Drasche, Epidemiology ; A. R. von Mosetig-Moorhof, Surgery ; J. Nowak, Hygiene ; C. Stoerk, Laryngoscopy ; L. von Schrotter, Diseases of the Chest and Larynx ; H. Auspitz, Diseases of the Skin and Syphilis ; I. Neumann, Diseases of the Skin and Syphilis ; M. Kaposi, Diseases of the Skin and Syphilis ; F. Salzer, Surgery ; S. Exner, Physiology ; M. Rosenthal, Diseases of the Nervous System ; G. Wertheim, Diseases of the Skin and Syphilis ; S. von Basch, Experimental Pathology ; T. Puschmann, History of Medicine ; E. Fleischl von Marzow, Physiology ; J. Schnitzler, Medicine ; R. Chrobak, Obstetrics and Gynæcology ; K. von Rokitansky, Obstetrics and Gynæcology ; L. Bandl, Obstetrics and Gynæcology ; E. von Stoffella, Special Pathology and Therapeutics ; J. Hofmokl, Surgery ; R. Ultzmann, Surgery ; A. Wölfler, Surgery ; J. Mauthner, Medical Chemistry. The following private teachers have the title of professor : L. Mauthner, Ophthalmic Surgery ; C. Böhm, Surgery ; L. M. Pollitzer, Diseases of Children ; W. Winternitz, Medicine ; A. Monti, Diseases of Children. There are also between eighty and ninety private teachers, adjuncts, and assistants.

The General Hospital (*Allgemeine Krankenhaus*) is capable of accommodating about 2,000 patients. There are two medical clinics, under Professors Duchek and Von Bamberger ; two surgical clinics, one of which is under Professor Billroth ; a clinic for Diseases of the Eye, under Professors von Arlt and Stellwag von Carion ; and three clinics for Obstetrics, two for students being under the charge of Professors Carl Braun-Fernwald and Späth, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Späth. There are also special clinics for Syphilis, under Professor Sigmund ; for Laryngoscopy, under Professor Schrötter; for Diseases of Children, under Professor Widerhofer; for Pyschology, under Professor Meynert; and for Otology, under Professor Grüber. A considerable portion of the school is also situated within the hospital: thus there are the Pathological Museum and *post mortem* room, under the direction of the Professor of Pathology; the room for medico-legal necropsies, under Professor Hofmann; the Institute for Experimental Pathology, under the direction of Professor Stricker; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Institute and Dissecting Room, under the direction of Professor Langer; the Physiological Institute, where the Practical Physiology is carried on under Professor Brücke; the Materia Medica Museum and the Medical Library are outside the hospital, in the Alsergrund.

The great clinics on medicine, surgery, &c., are conducted during the two sessions—from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually from four to eight weeks. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves.

Vienna affords great opportunities for the study of pathological anatomy. There are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day.

Besides the General Hospital, Vienna possesses the Wieden Hospital (600 beds), the Rudolf Institution for the Sick (*K. K. Krankenhaus Rudolfstiftung*) (860 beds), the Lunatic Asylum, the General Polyclinic or Dispensary, the Lying-in Hospital, the Leopoldstädt Children's Hospital (90 beds), the Crown Prince Rudolf Children's Hospital (40 beds), St. Joseph's Children's Hospital at Wieden (100 beds), St. Anne's Children's Hospital (100 beds), &c.

UNIVERSITY OF CRACOW.

The Medical Faculty of this University consists of the following professors, with several *docents*. *Ordinary Professors:* E. Korczynski, Medicine; J. Mikulicz, Surgery; L. Teichmann, Descriptive Anatomy; M. Madurowicz von Jelita, Midwifery and Gynæcology; S. Janikowski, Forensic Medicine; L. Rydel, Ophthalmic Surgery; A. Stopczanski, Medical Chemistry; A. Adamkiewicz, Pathology; L. Blumenstock, Forensic Medicine; T. Browicz, Pathological Anatomy. *Extraordinary Professors:* A. Rosner, Diseases of the Skin and Syphilis; J. Oettinger, History of Medicine; M. L. Jakubowski, Diseases of Children; S. Domanski, Diseases of the Nervous System; J. Lazarski, Pharmacology; A. Obalinski, Surgery; S. Parenski, Medicine. There are also several *privat-docents* and assistants.

UNIVERSITY OF GRATZ.

In this University the Medical Faculty consists of the following professors, with about twelve *docents*. *Ordinary Professors:* A. Schauenstein, Forensic Medicine; E. Zuckerkandl, Anatomy; K. von Rzehaczek, Surgery; C. von Helly, Midwifery and Gynæcology; A. Rollett, Physiology and Histology; C. Blodig, Ophthalmic Surgery; O. Rembold, Medicine; J. Eppinger, Pathological Anatomy; C. von Schroff, Materia Medica and Therapeutics; C. B. Hoffmann, Medical Chemistry; V. von Ebner, Histology and Embryology; R. von Krafft-Ebing, Psychiatry. *Extraordinary Professors:* J. von Koch, Epidemic Diseases and Sanitary Police; E. Lipp, Diseases of the Skin; R. Klemensiewicz, Pathology and Therapeutics; E. Börner, Obstetrics and Gynæcology; C. Zini.

Connected with the University are anatomical, physiological, pathological, and zoological institutes; medical, surgical, ophthalmic, obstetric, and gynæcological clinics; a laboratory for physiological and pathological chemistry; a chemical laboratory, &c. The hospitals are the general hospital (700 beds), a lying-in hospital (120 beds), the town hospital (80 beds), a children's hospital (80 beds), and two infirmaries (245 beds).

UNIVERSITY OF INNSBRUCK.

The following professors belong to the Medical Faculty. *Ordinary Professors:* M. Holl, Anatomy; F. Schauta, Obstetrics and Gynæcology; —— General Pathology and Pharmacology; M. von Vintschgau, Physiology; F. Schott, Pathological Anatomy; C. Nicoladoni, Surgery; I. Schnabel, Ophthalmic Surgery; P. von Rokitansky, Medicine; W. Löbisch, Medical Chemistry. *Extraordinary Professors:* F. Wildner, Veterinary Medicine; J. Oellacher, Histology and Embryology; E. Lang, Syphilology and Dermatology.

The ordinary laboratories, clinics, and other means of practical instruction, are possessed by this University. There are a general hospital (204 beds) and a lying-in hospital (130 beds).

UNIVERSITY OF PRAGUE.

The Medical Faculty of this University consists of the following professors, with several *docents*. *Ordinary Professors:* A. Pribram, Medicine; C. Gussenbauer, Surgery; —— Ophthalmic Surgery; Ph. Knoll, Pathology; J. Maschka, State Medicine; E. Hering, Physiology; F. Weber von Ebenhof, Midwifery; C. H. Huppert, Medical Chemistry; A. Breisky, Obstetrics and Gynæcology; H. Chiari, Pathology; S. Mayer, Histology; F. Hofmeister, Pharmacology. *Extraordinary Professors:* J. Lerch, Chemistry; J. Kaulich, Diseases of Children; P. J. Pick, Skin-Diseases and Syphilis; E. Zaufal, Aural Surgery; C. Weil, Surgery; O. Kahler, Medicine; F. Ganghofner, Medicine; A. Epstein, Diseases of Children; J. Soyka, Hygiene; W. Biedermann, Physiology; C. Rabl, Anatomy.

Connected with the University are an anatomical theatre; pathological, physiological, medico-chemical, and zoo-chemical institutes; medical, surgical, ophthalmic, and dermatological clinics (one of the medical clinics being Bohemian); obstetric clinics for practitioners and for midwives, &c. The hospitals are the General Hospital (948 beds), with the affiliated Hospital of the Bohemian Sisters (220 beds), the Franz-Josef Children's Hospital (100 beds), the Israelite General Hospital (52 beds), the Hospital of the Brothers of Mercy (166 beds), the Hospital of the Elizabethan Sisters (60 beds), the Public Lunatic Asylum (1,348 beds), the Lying-in Hospital (322 beds for mothers and 176 for children).

SWITZERLAND.

GRADUATION IN MEDICINE.

In Switzerland degrees in Medicine are granted in the Universities of Basle, Berne, Geneva, and Zürich. These degrees do not confer a licence to practise, for which a separate examination is required.

UNIVERSITY OF BASLE.

The degree of Doctor of Medicine, Surgery, and Midwifery, granted by this University, can only be obtained under the following conditions.

1. Application for admission to the examination must be made to the Dean of the Faculty in writing, enclosing: (*a*) a *curriculum vitæ*; (*b*) the academical matriculation of this place; (*c*) certificates of attendance at the academical lectures; (*d*) a certificate of conduct from the High School in which the candidate has made his principal studies; (*e*) a scientific treatise on any subject in medical or natural science. 2. The examination is partly written (*tentamen*) and partly verbal (*rigorosum*). 3. The written examination consists in the answering of five questions in Anatomy, Physiology, Pathology, Medicine, and Surgery. 4. In case of rejection, the Faculty can appoint a time for a repetition of the examination. 5. The whole of the professors of the Faculty are invited to the verbal examination. The following are the subjects: Anatomy, Physiology, Pathology, Medicine, Materia Medica, Surgery, and Midwifery. 6. The examination by one examiner must not last longer than half an hour. 7. The degrees in which doctorships are granted are *Summâ cum laude*, *Insigni cum laude*, *Magnâ cum laude*, *Cum laude*, and *Rité*. 8. In adjudicating on both the written and the verbal examination, not only will the special knowledge in the respective branches be taken into consideration, but also the possession of general scientific knowledge, and especially a comprehensive knowledge of Natural Science. 9. One hundred and twenty copies of the treatise must be delivered to the Faculty. 10. Promotions are not granted to applicants who have not passed the examinations here, but the Faculty can confer the degree of Doctor *honoris causâ*. 11. The fees for the examination amount to 350 francs—viz., 100 for the *tentamen*, 200 for the *rigorosum*, and 50 for the promotion. 12. If the candidate be rejected after either examination he forfeits the fees. The re-examination is free of charge.

The following are professors in the Medical Faculty of this University. *Ordinary Professors:* F. Miescher (senior), Pathological Anatomy: L. Rütimeyer, Comparative Anatomy and Zoology; A. Socin, Surgery; H. Immermann, Medicine; J. Kollmann, Anatomy; J. J. Bischoff, Obstetrics and Gynæcology; F. Miescher (junior), Physiology; M. Roth, Pathology; L. Wille, Psychiatry; H. Schiess, Ophthalmic Surgery. *Extraordinary Professors:* I. Hoppe, Therapeutics; E. Hagenbach-Burckhardt, Diseases of Children; R. Massini, Polyclinic and Prescribing; A. Burchhardt-Merian, Diseases of the Ear. There are also several private teachers.

Connected with the University are the town hospital, where clinics for medicine, surgery, diseases of the eye, mental diseases, and midwifery are conducted; a hospital for diseases of children, and institutions for practical instruction in physiology, pathology, chemistry, and botany.

UNIVERSITY OF BERNE.

Before admission to examination for the Degree in Medicine and Surgery, the candidate must submit to the Faculty of Medicine a manuscript dissertation of scientific value. If this be accepted, he must, after producing evidence of general, scientific, and medical education, be examined *vivâ voce* in Anatomy, Physiology, Pathological Anatomy, Legal Medicine, General Pathology and Medicine, Surgical Pathology and Surgery, Materia Medica, and Ophthalmology.

The Medical Faculty of this University is constituted of the following professors and about thirteen *docents*. *Ordinary Professors:* C. Emmert, Forensic Medicine and Hygiene: E. Gasser, Anatomy; T. Kocher, Surgery; T. Langhans, Pathological Anatomy; L. Lichtheim, Medicine; P. Müller, Obstetrics and Gynæcology; A. Vogt, Hygiene; E. Pflüger, Ophthalmic Surgery; M. von Nencki, Physiological Chemistry; H. Kronecker, Physiology; B. Luchsinger, Experimental Pharmacology and Toxicology. *Extraordinary Professors:* E. Schärer, Psychiatry; R. Demme, Diseases of Children. There are several private teachers.

Medical, surgical, obstetric, and special clinics, and physiological, pathological, and clinical laboratories, &c., are connected with the University.

UNIVERSITY OF GENEVA.

The University of Geneva grants the degree of Bachelor in Medical Science and Doctor of Medicine.

The following classes of persons are admitted as students in the Faculty of Medicine: 1. Bachelors in Letters; 2. Bachelors in Science; 3. Students who have attended during two years' lectures in the Section of Philosophy, and have undergone the examinations at the end of each year; 4. Pupils from the Classical Section of the Gymnasium, with certificates of Studies; 5. Swiss and strangers who give evidence of their studies by means of diplomas or certificates; 6. Persons who undergo satisfactory oral examinations in the subjects comprehended in the classical section of the Gymnasium; 7. Persons who furnish evidence that they have studied abroad, for a year at least in a corresponding faculty, may be inscribed in the Faculty of Medicine.

The course of study is as follows: *First Year: Winter Session:* Botany (first part); Physics (first part); Comparative Anatomy or Zoology; Inorganic Chemistry; Practical Comparative Anatomy. *Summer Session:* Botany (second part); Physics (second part); Comparative Anatomy or Zoology; Organic Chemistry (first part); Practical Chemistry; Botanical Excursions. *Second Year: Winter Session:*

Descriptive Anatomy (first part); Physiology (first part); Organic Chemistry (second part); Dissections. *Summer Session:* Descriptive Anatomy (second part); Physiology (second part); Practical Chemistry and Practical Comparative Anatomy. (Students are recommended to attend, in addition, courses of other subjects, such as Astronomy, Geography, Physics, Mineralogy, Geology, &c.) *Third Year: Winter Session:* Descriptive Anatomy (third part); Normal Histology; Dissection. *Summer Session:* Regional Anatomy; Embryogeny. Supplementary courses on subjects of the preceding years, on which the student's knowledge is weak; Practical Physiology, Histology, Comparative Anatomy, and Chemistry. (The examination for Bachelor in Medical Sciences is now undergone.) *Fourth Year: Winter Session:* General Pathology; Internal Pathology; External Pathology; Dissection of Regions; Medical and Surgical Hospital Practice. *Summer Session:* Special Pathological Anatomy; Pathological Histology; Internal Pathology; External Pathology; Pharmacology; Medical and Surgical Hospital Practice; Exercises in the Laboratory of Pathological Histology. *Fifth Year: Winter Session:* Therapeutics; Hygiene; Legal Medicine; Theory of Obstetrics; Internal Pathology; External Pathology and Operations; Medical and Surgical Hospital Practice. *Summer Session:* Therapeutics; Legal Medicine; Internal Pathology; External Pathology; Medical and Surgical Hospital Practice; Operations. *Sixth Year: Winter and Summer Sessions*: Medical, Surgical, and Obstetrical Hospital Practice; Polyclinic; Ophthalmology; Psychology, &c. Repetitions preparatory to the examination for the Doctorate.

Persons who have satisfied the conditions laid down regarding the admission of students to the Faculty of Medicine may become candidates for the degree of Bachelor in Medical Science. Students who have undergone the recognised annual examinations in the Faculty of Medicine or of Sciences are exempt from oral examination in the subjects in which they have already been examined; provided that the examinations have been undergone not more than two years previously. Persons who produce diplomas or certificates giving evidence of their studies may be exempted from further examinations in the subjects in which they have already passed.

The following may become candidates for the degree of Doctor of Medicine: 1. Bachelors in Medical Science; 2. Persons who produce diplomas or certificates indicating that they have gone through an equivalent course of study. There are five examinations for the degree of Doctor of Medicine. *First Examination:* Human Anatomy and Histology; Physiology; Pathological Anatomy and General Pathology; a Necropsy, for which one hour is allowed; making an Anatomical Preparation, for which four hours are allowed. *Second Examination:* Medicine; Surgery; Operative Surgery; three Operations, and Application of Bandages. *Third Examination:* Hygiene; Therapeutics; Materia Medica and Pharmacology; Legal Medicine; a Medico-Legal Report on a real or supposed case, for which one hour is allowed. *Fourth Examination:* Clinical Examination of two medical and two surgical patients and of one case of labour (fifteen minutes being allowed for each case); Obstetrics, with operations on the mannikin; Discussion on each Clinical Case; Written Commentary on a Medical and a Surgical Case, two hours being allowed. *Fifth Examination:* Defence of a Printed Dissertation, in the French language, on a subject in medical science chosen by the candidate, and previously communicated to the Faculty.

The examinations are public. Those for the degree of Bachelor are held at the beginning and end of the University year, and in the interval between the sessions. Application for admission must be made to the Dean of Faculty of Medicine eight days before the day of examination. The examinations for the degree of Doctor take place, on the demand of the candidates, at times determined by the Faculty.

Before being admitted to examination, each candidate pays to the beadle 40 *francs*; and after the last examination, 100 *francs* must be paid to the Faculty of Medicine. In case of unsatisfactory examination, half the first fee is returned, and the second is not paid.

The professorial staff consists of the following: *Ordinary Professors:* Laskowski, Anatomy; Schiff, Physiology; Zahn, Pathology; Eternod, Histology; Revilliod, Clinical Medicine; Julliard, Clinical Surgery; Vaucher, Clinical Obstetrics and Gynæcology; Olivet, Psychiatry; Vuillet, Polyclinic; D'Espine, Medicine; J. L. Reverdin, Surgery and Practical Surgery; Prevost, Therapeutics; Dunant, Hygiene; Gosse, Forensic Medicine.

UNIVERSITY OF ZURICH.

The following are the regulations for the degree of Doctor of Medicine.

1. In order to obtain the degree of Doctor of Medicine, the candidate must send to the Dean a written memorial, accompanied by (*a*) evidence of attendance on lectures of Physics, Chemistry, Botany, Zoology, and Medical Subjects: (*b*) a dissertation on some subject in medical science, which, after approval, the candidate must have printed at his own expense.

2. The dissertation is delivered by the Dean for examination to the teacher of the subject of which it treats, or to the member of the Faculty at whose suggestion it has been composed. A recommendatory opinion of the first examiner decides its acceptance. If the first opinion be doubtful or unfavourable, the thesis must be circulated among all the members of the Faculty, and is accepted if two-thirds give their written votes in its favour.

3. When the dissertation is approved, the candidate is admitted to examination. The first part is written, and the candidate has to answer two questions drawn by lot, one on Anatomy and Physiology, the other on Pathology and Therapeutics, Surgery, or Midwifery. The answers are circulated among the members of the Faculty, who, after examining them, express in writing their determination (by a simple majority) whether the candidate shall be admitted to the oral examination. This examination comprises the above-named subjects, and also General Anatomy, Pathological Anatomy, Materia Medica, and Ophthalmic Medicine. The votes of two-thirds of the members of the Faculty present are necessary for the passing of this examination.

4. After the examination has been passed and two hundred printed copies of the dissertation have been delivered, an official diploma is delivered in duplicate to the candidate.

5. The fee consists of 350 *francs* (£14), and 15 *francs* to the bedell; it is paid before the oral examination (if this be remitted, before graduation). There is no additional fee if it be necessary to repeat the examination. The fee is not returned if the candidate be definitely rejected. The sum of 100 *francs* is remitted to candidates who already possess a recognised diploma; and, in such cases, the Faculty may, by a majority of two-thirds, agree to omit the oral examination.

6. The Faculty has the power of granting the diploma of doctor *honoris causâ* for distinguished services to medicine.

The Medical Faculty consists of the following Professors, with several *docents*: *Ordinary Professors:* H. Meyer, Human Anatomy; H. Frey, Histology; U. Krönlein, Surgery; B. Luchsinger, Physiology; E. Klebs, Pathology; E. Eichhurst, Medicine; F. Horner, Ophthalmic Surgery; O. Wyss, Medicine; E. Frankenhäuser, Obstetrics and Gynæcology; A. Forel, Psychiatry. *Extraordinary Professor:* H. Spondly, Obstetric Medicine.

THE LICENCE TO PRACTISE MEDICINE.

THE following are the regulations for the licence to practise medicine in Switzerland. One licensing body examines at Geneva, and the other at Basle, Berne, and Zürich; both have the same regulations, and grant the licence to practise in all parts of the republic.

There are two examinations, preliminary and final. At Geneva candidates are admitted to the preliminary examination on producing one of the following certificates: 1. Bachelier ès lettres; 2. Bachelier ès sciences; 3. Certificates of having passed two examinations in the Section of Philosophy at Geneva, and of having previously taken not less than twenty hours per week of studies; 4. Certificates of foreign studies at the Classical Section of the Gymnasium at Geneva; 5. Certificates of foreign studies equivalent to those named above. At the Amalgamated Board of Basle, Berne, and Zürich, candidates must produce evidence of complete and satisfactory studies in a public school; and of attendance on courses of Anatomy, Chemistry, Physics, Physiology, Practical Physiology, and six months' work in a Chemical Laboratory.

The examination is practical and oral. The practical part comprises Anatomy and Histology. The oral examination comprises Botany, Zoology and Comparative Anatomy, Physics, Chemistry, Anatomy and Histology, and Physiology. At Geneva, candidates who have passed this examination are entitled to the designation of Bachelor of Medical Science.

In order to be admitted to the Final Examination for the Licence, candidates at Geneva must produce the certificate of Bachelor of Medical Science, and diplomas and certificates obtained after equivalent studies and examinations elsewhere. At the other Board, they must produce evidence of having passed the Preliminary Examination, and of having attended the following academic courses: Pathological Anatomy, Medicine, Practical Surgery and Bandaging (six months), Clinical Medicine and Clinical Surgery (each three sessions), Clinical Midwifery (two sessions), and Clinical Ophthalmic Medicine (one session).

The examination is written, practical, and oral. The written and practical part consists of—1. Examination of two Medical and two Surgical cases, one Ophthalmic case, and one of Midwifery, in the presence of two examiners; Written opinion of one of two Medical and two Surgical cases; 3. A *post mortem* Examination, and opinion on the same; 4. Performance of two Operations: one the ligature of an artery; the other according to the judgment of the examiners. 5. Written Examination on Forensic Medicine and Hygiene. The *vivâ voce* examination comprises:—1. Physiology; 2. General Pathology and Pathological Anatomy; 3. Special Pathology (Medicine) and Therapeutics; 4. Pharmacology; 5. Surgery; 6. Ophthalmology; 7. Obstetrics and Gynæcology; 8. Hygiene and Forensic Medicine.

DENMARK.

MEDICAL EDUCATION AND GRADUATION.

THE study of Medicine at the University of Copenhagen is open to any student who has matriculated there or in foreign Universities; but only Danish subjects can obtain through examination the right to practise as medical men in the country.

The course of study lasts six or seven years. It is divided into three parts, namely, an introductory and two principal courses.

1. The introductory part consists of Botany (with especial regard to medicinal plants), Physics, Zoology, and Chemistry, theoretical and practical. The student has to submit to a preliminary examination on these subjects, and he can then enter as a pupil of one of the hospitals, where he must attend in a fixed order, and for a certain time, the various wards.

2. The second course comprises Anatomy, Physiology, Pharmacology, and Dissections, in which the student has to submit to an examination.

3. The final course consists of the following: Theoretical Surgery, Clinical Surgery, Operative Surgery, Theory of Medicine, Clinical Medicine, Pathological Anatomy, General Pathology, Forensic Medicine, and Obstetric Medicine. The student is examined on these subjects, and has to present a written thesis in Medicine, and one on Surgery. Before the student can pass his examination in this concluding course, he must present a certificate showing that he has gone through a half-yearly clinical course of study under the chief physicians at the hospital in Surgery, Medicine, Skin-Diseases, and Syphilis; and a shorter course at the Lying-in Institution in Obstetrics and Diseases of Children.

When these examinations are passed, the obligatory course of study is concluded by a residence at the Lying-in Institution, in order to obtain a practical knowledge of operations in cases of abnormal labour. The candidate who has passed his examination has now a right to practise medicine; but the majority of candidates, before commencing to practise, endeavour to obtain an appointment at one of the hospitals, where they do duty during two years in a subordinate position. The entire course of study generally covers a period of from six to seven years.

In order to obtain the degree of Doctor of Medicine, the candidate has to prepare and submit to the Medical Faculty a treatise on a medical subject chosen by himself. If it be accepted by the Faculty, it is printed, and must be defended by the author publicly at the University, when at least two professors of the Medical Faculty appear as opponents.

Among other means for aiding the labours of the student at the University are: The Botanical Gardens, a Zoological Museum, a Chemical Laboratory, a Collection of Physical Instruments, an Anatomical Museum, Dissecting Rooms (Physiological Collection and Laboratory), Pharmacological Collection, Collection of Surgical Instruments, Pathological Museum, the Copenhagen Hospitals, and the Lying-in Institution. A Bacteriological Laboratory, under the direction of Dr. Salomonsen, has been established in Copenhagen.

No entrance fees are demanded, and all the lectures are free to the students. The fees payable in respect of the several examinations amount in all to 60 *kroner* (about 3*l.* 10*s.*). The expenses in connection with obtaining the degree of Doctor of Medicine amount to 160 *kroner* (about £9).

SWEDEN.

MEDICAL EDUCATION.

There are three medical institutions in Sweden which confer licences to practise, namely, the Universities of Upsala and Lund, and the Karolina Medico-Chirurgical Institute or Academy of Medicine in Stockholm. The Universities also confer the degree of Doctor of Medicine. A Medical School, with professors of the various branches of medical science, is connected with each.

The three institutions possess museums of normal and pathological anatomy, collections of chemical and pharmaceutical preparations and drugs, of surgical and obstetric instruments, physiological and pathological laboratories, &c.

Upsala possesses a hospital of 150 beds, which is entirely at the disposal of the University for the purpose of clinical teaching. The professors of medicine and surgery are *ex officio* medical officers of the hospital. Of the 150 beds, 100 or a few more are generally occupied, and are divided among medical, surgical, syphilitic, and obstetric cases.

In Lund, clinical instruction is given in the State Hospital and also in the University Hospital. In the latter, there are 80 beds for medical and 80 for surgical cases, with 67 beds in the syphilitic and 8 in the obstetric departments. Of these, 40 beds in the medical and 40 in the surgical department are appropriated to clinical instruction. The obstetric department is also clinical. Clinical instruction in the diseases of the eye is also given.

In Stockholm, the pupils of the Karolina Institution receive clinical instruction at the Seraphim Hospital, the Children's and Lying-in Hospitals, the Town and State Lock Hospital, and the Lunatic Asylum at Konradsberg.

At the Seraphim Hospital there are two medical and two surgical wards, under the charge of the ordinary and adjunct professors of medicine and surgery; and also a small gynæcological ward. It contains about 300 beds. An ophthalmic clinic is comprised in the surgical department; and the gynæcological clinic is attached to the medical.

The Lying-in Hospital or Obstetric Clinic can accommodate 30 patients; 20 beds are generally occupied. The professor of obstetrics in the Karolina Institution is *ex officio* chief physician.

The whole of the cases in the General Orphan Hospital are available for clinical instruction. The daily number of infants under one year old in the institution is from 100 to 200; sometimes it has been as high as 240. Of these, 10 or 12 per cent. are generally on the sick-list. There are also about 80 children between one and fifteen years of age. In addition, from 1,600 to 2,000 are attended yearly as out-patients. Clinical instruction is given by the professor of diseases of children for eight months in the year, and four months by his adjunct.

The Town and State Lock Hospital has 180 beds, of which, on an average, 140 are occupied daily.

The Hospital for the Insane at Konradsberg has 220 beds, which are all available for clinical instruction. The professor of psychological medicine in the Karolina Institute is the chief physician.

LICENCE AND DEGREE IN MEDICINE.

No one can practise Medicine in Sweden who has not obtained a licence from one of the three Boards. The examinations for the licence consist of two parts. The first, for the Diploma of Candidate in Medicine, embraces Anatomy, Histology, Physiology, Embryology, Medical Chemistry, Pharmacology, Toxicology, General Pathology, and History of Medicine. The candidate must, after passing the maturity examination on leaving a lyceum, have undergone a preliminary (medico-philosophical) examination in Botany, Zoology, Chemistry, and Physics, or have passed an examination as candidate in Philosophy. He must also have followed the practical laboratory courses of Chemistry, Physiology, and normal and morbid Anatomy. The examination for the licence comprises Medicine, Diseases of the Skin and Syphilis, Diseases of Children, Surgery, Obstetrics and Gynæcology, Psychiatry, Pathological Anatomy, and Forensic Medicine. The candidate must have passed the examination for candidate in Medicine, and must subsequently have attended the clinics of Medicine, Surgery, Obstetric Medicine, Diseases of Children, Syphilis, and Diseases of the Mind; and must have obtained a competent knowledge of Pharmacy. Attendance on oral lectures is not obligatory.

The degree of Doctor of Medicine is conferred by the Universities of Lund and Upsala on Licentiates of those Universities and of the Academy at Stockholm, on their presenting and defending a thesis. Attendance on lectures is obligatory for the degree.

NORWAY.

MEDICAL EDUCATION.

In the University of Christiania, which is the only School of Medicine in Norway, lectures are delivered on the following subjects: Surgery, Ophthalmic Surgery, Physiology, Midwifery, and Diseases of Women and Children, Descriptive Anatomy, Forensic Medicine, Pathology, and Therapeutics, Hygiene, Materia Medica, General Pathology and Pathological Anatomy, Surgical Pathology, Zoology, and Chemistry. Clinical instruction is given in the General Hospital on Surgery, Ophthalmic Surgery, Medicine, Diseases of the Skin and Syphilis; at the Lying-in and Children's Hospital, on the Diseases of Women and Children; at the Ganstead Asylum and at the Christiania Lunatic Asylum, on Mental Diseases; and in the Town Hospital, on Chronic Diseases. Practical instruction is also given in Chemistry, Anatomy, and Botany.

LICENCE AND DEGREE.

Before entering on the study of Medicine, the candidate has to pass two preliminary examinations: one in Arts, including Norwegian, Latin, Greek, French, German, English, Mathematics, Geography, and History; and one in Philosophy, including Geometry, Zoology, Botany, Astronomy, and the elements of Chemistry and Physics. Having passed these, he is admitted to matriculation, and afterwards studies Medicine nearly seven years.

There are three professional examinations. The first is held two and a half years after matriculation, in Anatomy, Dissections, the use of the Microscope, Physiology, and Medical Physics. The second, held three and a half years after the first, includes Pharmacology, Toxicology, Medicine, Therapeutics, General Pathology, Pathological Anatomy, Surgery, Operative Surgery, Obstetrics and Gynæcology, Diseases of Children, Forensic Medicine, Hygiene, and a practical examination in Medicine and Surgery. Practical work in the hospital wards is also obligatory.

On passing the final examination, the candidate becomes a Physician, and obtains the right to practise. To obtain the degree of Doctor, he must pass a further examination, and defend a thesis.

HOLLAND.

MEDICAL EDUCATION AND GRADUATION.

THE degree of Doctor of Medicine is granted in Holland by the Universities of Leyden, Groningen, and Utrecht, and the Communal University of Amsterdam.

In each of the four towns there are a hospital, and laboratories of Physics, Chemistry, Botany, Zoology, Anatomy, Physiology, Experimental Pathology, and Pharmacy; and, in Amsterdam, laboratories of Hygiene and Pathological Anatomy.

A candidate for admission as student of Medicine must have passed one of the following examinations: 1. a Literary and Mathematical Examination (Mathematics, Dutch, French, German, and Elementary Latin); 2. an examination for admission to an University (Mathematics, Dutch, Latin, and Greek); or, 3, he must have gone through in a satisfactory manner the classes of a Latin school (Mathematics, Geography, History, Latin, Greek, Dutch, French, German, and English). Those only who belong to classes 2 and 3 are admissible to the degree of Doctor of Medicine.

In the University, the following three examinations have to be passed; the first two years after entry, and the others at further intervals of two years; 1. Botany, Zoology, Chemistry, and Physics; 2. Anatomy, Physiology, Histology, Pharmacology, and General Pathology; 3. Internal Pathology, Surgery, Obstetrics, Pathological Anatomy, Pharmacodynamics, and Hygiene. The candidate must also present a thesis.

The Faculty grants the degree of Doctor of Medicine to those who have passed the three examinations, and who have shown, at the time of admission, that they possess a competent knowledge of Latin and Greek. The degree does not confer a right to practise.

STATE EXAMINATION.

This examination is conducted by eight professors, appointed annually and paid by the Government. The applicant for admission must be a Doctor of Medicine of some University, or possess a certificate of gymnasial maturity, or pass a preliminary literary and philosophical examination. The course of medical study must extend over at least six terms. The medical examination includes General and Special Pathology, Pharmacology, Morbid Anatomy, Medical Jurisprudence, Clinical Medicine, Clinical Surgery, and Obstetrics.

BELGIUM.

GRADUATION IN MEDICINE.

DEGREES in Medicine are granted by the Universities of Brussels, Ghent, Liège, and Louvain. The degrees, when legalised by a Government commission, give the right of practice in Belgium. The Universities of Brussels and Louvain confer also honorary titles, without licence to practise.

The examinations for the degree of Doctor of Medicine are alike in the four Universities. 1. An examination in Natural Science must be passed before the Faculty of Science; it comprises Chemistry, Physics, Botany, Zoology, elements of Mineralogy and Geology, Logic, Psychology, and Moral Philosophy (all oral), and Practical Chemistry. This examination may be passed either entire or in two divisions. 2. An examination for candidates in Medicine must be passed, either entire or in two divisions, before the Faculty of Medicine; it comprises Descriptive Anatomy, Histology, Physiology including Embryology, Elements of Comparative Anatomy, and Materia Medica, with Dissections and Practical Histology. 3. There are three further examinations for the Doctorate: *a.* an examination (entire or in two divisions) in Medicine, General Therapeutics and Pathology, Pathological Anatomy, Hygiene, and Practical Pathological Histology; *b.* an examination in Surgery, including Ophthalmic Surgery, Obstetrics, and Forensic Medicine; *c.* a clinical examination in Medicine, Surgery, and Midwifery, and a practical examination in Regional Anatomy and Operative Surgery.

The total duration of study is seven years. The law, however, only requires that the student shall have attended hospital practice for three years.

Every student, at the beginning of the year, takes out an inscription, for which he pays 15 *francs*. For the courses required for each of the five examinations, a fee of 200 *francs* is paid. The examination fees are: for the first two examinations, each 40 *francs*; for each of the three examinations for the doctorate, 80 *francs*.

UNIVERSITY OF BRUSSELS.

Degree for Foreign Practitioners.

By the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Residence is not required from such as are unable to absent themselves long by reason of their professional occupations.

Candidates must come in person and have their names inscribed in the books of the University. The fees are : for inscription of name, 215 fr. (£8 12*s.*) ; for examination, 315 fr. (£12 12*s.*) ; for registration of diploma, 10 fr. (8*s.*) ; total, 540 fr. (£22 12*s*). The examination consists of three parts. 1. General Therapeutics, including Pharmaco-dynamics (proportion of doses), Special Pathology and Therapeutics of Internal Diseases, General Pathology, and Pathological Anatomy. 2. Surgical Pathology, Ophthalmic Surgery, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. Examination at the Hospital of one or two patients under Medical and Surgical Treatment ; Examination in Midwifery, consisting in Obstetrical Operations on the *mannequin* (model of pelvis) ; Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, &c.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

Examinations take place at any time between October 15 and June 20, except during Christmas and Easter. They are *vivâ voce* and written, but candidates may be exempted from the former, and confine themselves to the written tests by paying an additional fee of £1 for each test. Candidates must exhibit their qualifications or diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English, through the medium of an interpreter, for such candidates as are not familiar with the French language.

RUSSIA.

GRADUATION IN MEDICINE.

Degrees in Medicine are granted by eight universities in Russia ; namely, those of Moscow, Kieff, Kasan, Charkoff, Odessa, Warsaw, Dorpat, and Helsingfors ; also by the Medico-Chirurgical Academy of St. Petersburg. Students are admitted after having gone through an eight years' course of instruction in a gymnasium, and having passed the *abiturienten-examen*. The ordinary age for commencing medical studies is 19.

The course of medical study extends over five years. The mode of instruction and the regulations are nearly alike in the several universities. The session usually begins on Sept. 1, and terminates at the end of May. The remaining three months constitute the vacation. The course of study is as follows :—

First Year : Descriptive Anatomy, with Dissection ; Inorganic Chemistry ; Experimental Physics ; Botany ; Mineralogy ; and Zoology.

Second Year : Descriptive Anatomy, with Dissections ; Physiology ; Histology ; Comparative Anatomy ; Organic and Practical Chemistry ; Botany ; Materia Medica ; and Experimental Physics.

Third Year : Pathological Anatomy and Histology, with necropsies ; General Therapeutics ; Auscultation and Percussion ; Chemical and Microscopic Examination of Secretions and Excretions Special Pathology and Therapeutics (Medicine) Surgical Pathology, Dislocations, and Bandaging ; Diseases of the Nervous System.

Fourth Year : Clinical Medicine ; Clinical Surgery ; Operative Surgery and Topographic Anatomy ; Gynæcology and Obstetrics ; Diseases of Children ; Diseases of the Skin ; Venereal Diseases ; Diseases of the Eye and Ear ; Hygiene ; Forensic Medicine and Toxicology.

Fifth Year : Clinical Medicine ; Clinical Surgery ; Clinical Gynæcology, and Obstetric Operations ; Clinical Courses of Diseases of Children ; Venereal Diseases ; Diseases of the Eye and Mental Diseases ; *Post mortem* examinations.

At the end of each year the student has to undergo an examination in the subjects to which he has attended during the year ; and at the end of the fifth year there is a final examination in all the subjects of the curriculum, except Natural History.

Having passed this examination, the candidate receives his diploma, which entitles him to practise in any part of the Russian Empire. There is no State-examination. The examinations are public, and the examiners are the professors of the various subjects.

Two diplomas are granted. One corresponds to the title of physician or practitioner, which is granted after the above-mentioned examinations have been passed, and gives the right to practise. For the degree of Doctor of Medicine, the candidate must undergo, two years later, a further examination, and write and defend a thesis on a subject chosen by himself.

ITALY.

GRADUATION IN MEDICINE.

The Italian Universities at which degrees in Medicine are granted are the Royal Universities of Bologna, Cagliari, Catania, Genoa, Messina, Modena, Naples, Padua, Palermo, Pavia, Parma, Pisa, Rome, Sassari, Siena, and Turin ; the free Universities of Camerino, Perugia, and Ferrara, and the Royal Institute for Superior Studies at Florence.

The regulations for graduation in medicine in the Universities of Italy are as follows.

1. The Medico-Chirurgical Faculty has the duty of giving instruction in all subjects relating to medicine and surgery, promoting the cultivation of all that is known in that field, and qualifying for the exercise of the medical profession in its various branches. 2. The course of medical and surgical study extends over six years, at the end of which free licence to practise is granted. 3. The following courses of instruction are obligatory ; General Chemistry, Organic and Inorganic ; Botany ; Zoology, with Comparative Anatomy and Physiology ; Experimental Physics ; Normal Human Anatomy (*i.e.* Histology, Descriptive and Topographic Anatomy, and Dissection) ; Human Physiology ; General

Pathology; Pathological Anatomy (demonstrations and exercises); Materia Medica and Experimental Pharmacology; Special Medical Pathology (or Principles and Practice of Medicine); Special Surgical Pathology (Surgery); Clinical Medicine and Exercises in Semeiotics; Clinical and Operative Surgery; Theory and Practice of Ophthalmic Surgery; Theory and Practice of Diseases of the Skin and Syphilis; Midwifery and Clinical Midwifery; Forensic Medicine and Public Hygiene; Theoretical and Clinical Psychiatry (where opportunities exist). 4. The obligatory courses must each be attended one year; except Pathological Anatomy, of which two years are required, and Human Anatomy and Clinical Medicine and Surgery, each three years. 5. The following courses are non-obligatory or complementary: Medical Chemistry; Experimental Toxicology; Critical History of Medicine. 6. Besides these, other free courses may also be given. 7. There are three biennial examinations in the Faculty of Medicine; the first for 'promotion'; the second for 'licence'; the third for the degree of 'laureate,' with a diploma conferring full licence to practise. 8. In the Universities of Pisa and Siena the licentiate has the title of laureate of the first stage (*laurea di primo grado*). 9. In order to be admitted to the first examination (*promozione*) the candidate must have been a student at the University at least two years, and have diligently attended the courses of Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, Experimental Physics, Human Anatomy, and any subjects of instruction that he may choose, so as to make up eighteen hours of instruction per week. 10. The subjects of examination are Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, and Experimental Physics. The Examining Board consists of the official teachers of the subjects of examination, with one or two additional examiners not belonging to the teaching body. On the proposal of the Faculty, and with the consent of the Minister, the examination for promotion may be divided into two parts, one to be held at the end of the first year, and the other at the end of the second year. At the beginning of each scholastic year, the Faculty determines what courses are to be followed, and when. 11. The candidate for admission to the several examinations (licence) must have passed the first examination, have attended the University during two other years, and have diligently attended courses of Human Anatomy and Physiology, General Pathology, Practical Pathological Anatomy, Materia Medica and Experimental Pharmacology, Special Medical Pathology, Special Surgical Pathology, Clinical Medicine, and Clinical Surgery. 12. The Examining Board is constituted as in Section 10. The examination is oral, and practical as regards Human Anatomy and Materia Medica. 13. A candidate for admission to the third examination (*laurea*) must have passed the second examination, have subsequently been a student at the University during two years, and have diligently attended the courses of Clinical Dermatology and Syphilology, Clinical Ophthalmic Surgery, Midwifery and Clinical Midwifery, Clinical Psychiatry, Exercises in Pathological Anatomy, Clinical Medicine and Surgery, Operative Surgery, Forensic Medicine and Hygiene, and voluntary courses so as to make up eighteen hours of instruction each week. 14. The candidate has to undergo an examination on the dead body and two clinical examinations. 15. The examination on the dead body is conducted by a subcommittee consisting of all the professors of Operative Surgery, Pathological Anatomy, and Forensic Medicine, with one or two assessors not belonging to the official teaching body. 16. In this examination, the candidate performs on the dead body a surgical operation, the nature of which is decided by lot. He also performs a necropsy, and draws up a description of the appearances seen. Finally, he answers the questions put to him by the examiners, and especially on the results of the necropsy, which are asked by the professor of Forensic Medicine. 17. The first clinical examination is conducted in the presence of a subcommittee consisting of the professors of Clinical Dermatology and Syphilology, Clinical Obstetrics, Clinical Psychiatry, Clinical Ophthalmology, and Forensic Medicine, with one or two extra-professorial assessors. 18. In this examination, the candidate examines four cases of diseases selected from the four special classes which have not previously been examined or treated in the clinical wards, and gives his opinion on the diagnosis, prognosis, and treatment. He afterwards answers the questions and observations of the examiners, and especially replies to the questions put by the professor of Forensic Medicine on the obstetric and psychological cases. 19. The second clinical examination is conducted in the presence of a subcommittee, consisting of the Professors of Clinical Medicine, Clinical Surgery, Medicine, Surgery, and Forensic Medicine, with one or two extra-professorial assessors. 20. The candidate examines in the presence of the subcommittee four patients, two medical and two surgical, who have not yet been examined or treated in the wards, and writes a description of the cases. He finally answers the questions asked by the examiners. 21. A student must have passed each stage of the third examination before he can be admitted to the next stage. 22. In each examination, a student rejected in one subject alone may present himself for examination in this subject only on a future occasion; but if he be rejected in two or more subjects, the whole examination must be repeated. 23. The three stages of the third examination having been passed, a committee judges of the merits of the candidates, and the successful candidates are declared Doctors in Medicine and Surgery.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some recognised foreign University, and satisfactory proof that they have actually gone through all the studies and passed the examinations required for the same. They must also pass the ordinary examinations for the medical degree, and pay the fees. The examinations are usually conducted in the Italian or the Latin language.

M. MAREY has communicated to the Académié des Sciences his last researches on the locomotion of man and animals. He especially aimed at ascertaining the trajectory or curve described by a portion of a living body in motion. The experimenter formerly used instantaneous photography, but this method he considered to be faulty, because inevitably the curve described was only represented in height and length, both thickness and perspective being neglected. M. Marey now uses stereoscopy. His researches have revealed some interesting facts concerning the act of walking in the normal state and in lameness, the flight of birds, and the action of the feet of horses.

UNITED STATES OF AMERICA.[*]

INSTITUTIONS GRANTING DEGREES.

The United States possess a very large number of institutions empowered by charter to grant the degree of doctor of medicine; these being in some instances special colleges and schools of medicine and surgery, and in others the medical departments of universities. The subjoined is a list of them. There are also several eclectic and homœopathic colleges, which are not included in the list.

Alabama.—Medical College of Alabama (Mobile).

Arkansas.—Medical Department of Arkansas Industrial University (Little Rock).

California.—Cooper Medical College (San Francisco): Medical Department of the University of California (San Francisco).

Colorado.—Medical Department of the University of Denver: Medical Department of the University of Colorado (Boulder).

Connecticut.—Medical Department of Yale College (New Haven).

District of Columbia.—National Medical College, Columbian University (Washington): Medical Department of the University of Georgetown (Washington): Medical Department of Howard University (Washington).

Florida.—Tallahassee College of Medicine and Surgery.

Georgia.—Medical College of Georgia (Augusta): Atlanta Medical College: Southern Medical College (Atlanta).

Illinois.—Rush Medical College (Chicago): Chicago Medical College: Women's Medical College (Chicago): College of Physicians and Surgeons of Chicago: State Board of Health of Illinois: Quincy College of Medicine.

Indiana.—Physio-Medical College of Indiana (Indianopolis): Medical College of Indiana (Indianopolis): Central College of Physicians and Surgeons (Indianopolis): Fort Wayne College of Medicine: Hospital Medical College of Evansville.

Iowa.—College of Physicians and Surgeons (Keokuk): Medical Department of the State University (Iowa City): College of Physicians and Surgeons of Iowa (Des Moines).

Kansas.—Medical Department of the University of Kansas (Lawrence).

Kentucky.—Medical Department of the University of Louisville: Kentucky School of Medicine (Louisville): Louisville Medical College: Hospital College of Medicine (Louisville).

Louisiana.—Medical Department of the University of Louisiana (New Orleans).

Maine.—Medical School of Maine at Bowdoin College (Brunswick).

Maryland.—University of Maryland (Baltimore): College of Physicians and Surgeons (Baltimore): Baltimore Medical College: Women's Medical College (Baltimore).

Massachusetts.—Harvard University (Boston): College of Physicians and Surgeons (Boston).

Michigan.—Department of Medicine and Surgery, University of Michigan (Ann Arbor): Detroit Medical College: Michigan College of Medicine (Detroit).

Minnesota.—Minnesota College Hospital (Minneapolis): Medical Department of the University of Minnesota (Minneapolis).

Missouri.—Medical School of the University of Missouri (Columbia): Missouri Medical College (St. Louis): St. Louis Medical College: Kansas City Medical College: St. Louis College of Physicians and Surgeons: North-Western Medical College of St. Joseph: Medical Department of the University of Kansas: St. Joseph Medical College: Kansas City Hospital College of Medicine.

Nebraska.—Omaha Medical College: College of Medicine of the University of Nebraska (Lincoln).

New Hampshire.—Medical Department of Dartmouth College (Hanover).

New Jersey.—Medical Society of New Jersey.

New York.—College of Physicians and Surgeons of the City of New York: Albany Medical College: Medical Department of the University of the City of New York: Medical Department of the University of Buffalo: Long Island College Hospital (Brooklyn): Bellevue Hospital Medical College (New York): College of Medicine of Syracuse University: Women's Medical College (New York): Medical Department of Niagara University (Buffalo).

North Carolina.—Medical Department of Shaw University (Raleigh).

Ohio.—Medical College of Ohio (Cincinnati): Columbus Medical College: Starling Medical College (Columbus): Medical Department of the Western Reserve University (Cleveland): Cincinnati College of Medicine and Surgery: Miami Medical College (Cincinnati): Physio-Medical Institute (Cincinnati): Medical Department of the University of Wooster (Cleveland): Toledo Medical College: North-Western Ohio Medical College (Toledo).

Oregon.—Medical Department of the Willamette University (Portland).

Pennsylvania.—Medical Department of the University of Pennsylvania (Philadelphia): Jefferson Medical College (Philadelphia): Women's Medical College (Philadelphia): Medico-Chirurgical College of Philadelphia.

South Carolina.—Medical College of the State of South Carolina (Charleston).

Tennessee.—Medical Department of the University of Nashville and Vanderbilt University (Nashville): Medical Department of Central Tennessee College (Nashville): Nashville Medical College: Memphis Hospital Medical College.

Vermont.—Medical Department of the University of Vermont (Burlington).

Virginia.—Medical Department of the University of Virginia (Charlottesville): Medical College of Virginia (Richmond).

The following institutions are for educational purposes only, and do not grant degrees.

Maine.—Portland School for Medical Instruction.

Maryland.—Medical Department of the Johns Hopkins University (Baltimore).

North Carolina.—Medical Department of the University of North Carolina.

The laws regulating the practice of medicine vary in the different States. The following is an outline of the laws of each State and Territory.

Alabama.—Diplomas of Medical Colleges confer no right to practice. Licences are granted after examination by the Board of Censors of the Medical Association of the State, and the Board of Censors of the Medical Societies (43 in number) affiliated to the Association.

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[*] For much information regarding medical education and practice in the United States of America, we are indebted to the 'Sixth Annual Report of the State Board of Health of Illinois' (for 1884).

Arizona (Territory). — Diplomas of regularly organised medical colleges are recognised and registered.

Arkansas.—Authorisation to practise is granted after examination by County Boards. Candidates rejected by County Boards; may be examined by State Board, and receive licence if found qualified. Licences are registered, and qualify for practice throughout the State.

California.—A Board of Examiners issues certificates to holders of genuine diplomas, and examines candidates for practice who are not graduates or licentiates.

Colorado.—The State Board of Medical Examiners grants licences to graduates after examinations of their diplomas, and to other persons after an examination in medical science and practice.

Connecticut.—No law for recognition of diplomas or for examination. Itinerant practitioners are licensed.

Columbia (District).—The Medical Society of the District of Columbia grants licences after examination, or the production of a diploma from a recognised medical college or Board of Examiners.

Florida.—Boards of Medical Examiners examine and grant licences to persons not possessing diplomas.

Georgia.—Authorisation to practise is granted to holders of diplomas from incorporated medical colleges, medical schools, or universities. Practitioners must be registered in the county in which they practise.

Illinois.—The State Board of Health examines diplomas of persons desiring licence to practise, and issues certificates to those whose certificates are genuine. Other persons receive licence after examination by the Board. Certificates are registered in the counties in which the holders reside.

Indiana.—No law regulating qualifications. Practitioners of medicine are registered in the counties in which they reside.

Iowa.—No regulation as to recognition of qualifications. Cities may regulate, license, and tax itinerant practitioners.

Kansas.—The regulations are generally similar to those of California.

Kentucky.—A Board of Medical Examiners in each judicial district examines applicants and grants certificates dated for not more than five years. Diplomas of Universities, &c., are apparently not legally recognised.

Louisiana.—Degrees of Doctor of Medicine from a recognised institution in America or Europe are recognised and certified by the State Board of Health. No provision for examination of candidates for registration.

Maine.—No law regulating medical practice.

Maryland.—No Act regulating medical practice.

Massachusetts.—No law regulating medical practice.

Michigan.—Graduates of legally authorised institutions in the United States or in other countries are registered.

Minnesota.—The Faculty of the Medical Department of the University of Minnesota examines diplomas of applicants for permission to practise, and recognises them if genuine, and examines other candidates for practice. Certificates are registered by county clerks.

Mississippi.—All candidates for practice must be examined and licensed by Boards of Censors, of which one is appointed for each congressional district. Diplomas are not recognised as qualifications. Licences to practise are registered in counties.

Missouri.—Degrees in Medicine are examined and verified by the State Board of Health. Persons not holding diplomas are examined by the Board. All certificates of Board are registered in the counties in which the holders reside.

Nebraska.—Graduates of medical colleges and persons licensed after examination by medical boards of other States are entitled to registration in their respective counties. No provision for ascertaining genuineness of diplomas.

Nevada.—Diplomas of chartered medical schools are recognised and registered in counties.

New Hampshire.—Boards of Censors elected by duly organised medical societies in the State grant licences to holders of satisfactory diplomas, and to other persons after examination.

New Jersey.—Graduates of medical colleges or universities of good standing, or medical societies authorised to grant diplomas, or persons legally qualified in other States, are entitled to be registered as practitioners in the counties in which they reside.

New Mexico (Territory).—A Board of Medical Examiners examines diplomas as to their genuine ness, and examines persons not holders of diplomas. Certificates are registered in counties.

New York.—All qualifications must be registered in the counties where the practitioners reside. Diplomas of other States are examined and, if approved, endorsed by an incorporated medical institution within this State. The degree of Doctor of Medicine granted within this State is a qualification to practise, when duly registered.

North Carolina.—A Board of Medical Examiners examines all applicants for licence to practise.

Ohio.—Persons are prohibited from practising who do not possess a degree from a School of Medicine in the United States or in a foreign country, or a certificate of qualification of a State or county medical society.

Oregon.—No law for regulating practice of medicine.

Pennsylvania.—Diplomas of legally chartered universities are recognised, on presentation to the protonotary of each county, and registration by him.

Rhode Island.—No regulations as to qualifications.

South Carolina.—Diplomas and qualifications are admitted, on being exhibited to the faculty of some incorporated college or the Medical Board of the State, and, on approval, registered.

Tennessee.—There are no laws regulating the practice of medicine.

Texas.—Boards of Medical Examiners grant certificates of qualification, after examination. Certificates must be registered in counties.

Vermont.—Boards of Censors appointed by organised medical societies examine diplomas and recognise them if approved, and examine candidates not having diplomas; and grant certificates of authorisation to practise.

Virginia.—All medical practitioners must be licensed.

West Virginia.—The State Board of Health issues certificates of qualification to holders of diplomas of reputable colleges, and examines and licenses others.

Wisconsin.—Professional privileges are granted only to persons who have a diploma of some incorporated medical society or college, or who are admitted to practice after examination by a State or county medical society.

Wyoming (Territory).—No person is allowed to practise without a diploma from a chartered medical school, to be registered in the county where the holder resides.

HARVARD UNIVERSITY, BOSTON.

The Medical Faculty of this University is constituted as follows: Dr. C. W. Eliot, *President*; Dr. Oliver W. Holmes, *Emeritus* Professor of Anatomy; Dr. H. J. Bigelow, *Emeritus* Professor of Surgery; Dr. H. P. Bowditch (Physiology); Dr. F. Minot (Theory and Practice of Physic); Dr. J. P. Reynolds (Obstetrics); Dr. H. W. Williams (Ophthalmology); Dr. D. W. Cheever (Surgery); Dr. J. C. White (Dermatology); Dr. R. T. Edes (Assistant, Clinical Medicine); Dr. F. W. Draper (Assistant, Legal Medicine); Dr. C. F. Folsom (Assistant, Mental Diseases); Dr. F. T. Knight (Assistant, Laryngology); Dr. C. B. Porter (Assistant, Surgery); Dr. E. N. Whittier (Assistant, Clinical Medicine); Dr. J. Collins Warren (Assistant, Surgery); Dr. Reginald H. Fitz (Pathological Anatomy); Dr. William L. Richardson (Assistant, Obstetrics); Dr. F. W. Draper (Assistant, Legal Medicine); Dr. T. Dwight (Anatomy); Dr. Edward S. Wood (Chemistry); Dr. William H. Baker (Assistant, Gynæcology); Dr. W. B. Hills (Assistant, Chemistry).—Other instructors are:—Dr. S. H. Durgin (Lecturer on Hygiene); Dr. H. P. Quincy (Instructor in Histology); Dr. F. A. Harris (Demonstrator of Medico-Legal Examinations); Dr. F. C. Shattuck (Instructor in Theory and Practice of Physic); Dr. E. H. Bradford (Assistant in Clinical Surgery); Dr. F. H. Davenport (Assistant in Gynæcology); Dr. G. M. Garland (Assistant in Clinical Medicine); Dr. J. W. Warren (Assistant in Experimental Therapeutics and Physiology); Dr. G. W. West (Demonstrator of Bandaging and Apparatus); Dr. W. W. Gannett (Assistant in Pathological Anatomy); Dr. C. M. Green (Instructor in Obstetrics); Dr. C. S. Minot (Instructor in Histology and Embryology); Dr. F. H. Williams (Instructor in Materia Medica); Dr. W. C. Emerson (Assistant in Chemistry); Dr. W. J. Otis (Assistant in Operative Surgery); Dr. Samuel J. Mixter (Assistant in Anatomy); Dr. C. Harrington (Assistant in Chemistry); Dr. O. K. Newell (Assistant in Anatomy); Dr. H. F. Vickery (Assistant in Clinical Medicine). The following gentlemen will give special clinical instruction:—Dr. John Homans (Diagnosis and Treatment of Ovarian Tumours); Dr. T. W. Fisher and Dr. W. B. Goldsmith (Mental Diseases); Dr. Francis B. Greenough and Dr. A. Post (Syphilis); Dr. Oliver F. Wadsworth (Ophthalmoscopy); Dr. J. Orne Green and Dr. Clarence J. Blake (Otology); Dr. E. G. Cutler and W. W. Gannett (Auscultation); Dr. J. P. Oliver and Dr. T. M. Rotch (Diseases of Children); Dr. S. G. Webber and Dr. J. J. Putnam (Diseases of the Nervous System); Dr. James R. Chadwick (Gynæcology).

All candidates for admission who hold no degree in arts or science must pass a written examination on entrance to this School, in English, Latin, Physics, and in any one of the following subjects: French, German, Elements of Algebra or of Plain Geometry, Botany.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study, to be as ample and full as heretofore. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent. upon all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course and have passed a satisfactory examination in the studies of the same.

The order of studies and examinations for the four years' course is as follows:—*First Year.*—Anatomy, Physiology, and General Chemistry. *Second Year.*—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery. *Third Year.*—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery. *Fourth Year.*—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Forensic Medicine. The examinations are held in the following order: End of first year—Anatomy, Physiology, and General Chemistry. End of second year—Topographical Anatomy, Medical Chemistry, Materia Medica, and Pathological Anatomy. End of third year—Therapeutics, Obstetrics, Theory and Practice of Medicine, Surgery. End of fourth year—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Forensic Medicine.

The order for the three years' course is as follows: *First Year.*—Anatomy, Physiology, General Chemistry and Materia Medica. *Second Year.*—Practical and Topographical Anatomy, Medical Chemistry, Pathological Anatomy, Clinical Medicine, and Clinical Surgery. *Third Year.*—Therapeutics, Obstetrics. Theory of Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Forensic Medicine. The examinations of the first two years are common to both groups of students. The final examinations at the close of the third year are in the following subjects: Therapeutics, Obstetrics, Surgery and Clinical Surgery, Medicine, Clinical Medicine.

Every candidate for a degree must be twenty-one years of age; must have studied medicine three or four full years, have spent at least one continuous year at this School, have passed a written examination upon all the prescribed studies of the course taken, and have presented a thesis.

Course for Graduates.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies in such subjects as may specially interest them, the Faculty has established a course which comprises, in addition to the list of special departments above stated, the following branches: Histology; Physiology; Medical Chemistry; Pathological Anatomy. On payment of the full fee the privilege of attending any of the other exercises of the Medical School, the use of the laboratories and library, and all other rights accorded by the University will be granted. Graduates of other Medical Schools who may desire to obtain the degree of M.D. at this University will be admitted to examination for this degree after a year's study in the Graduates' Course. Examination on entrance is not required.

Fees.—The fees are: for Matriculation, 5 dollars; for the year, 200 dollars; for one term alone, 120 dollars; for Graduation, 30 dollars. For Graduates' course the fee for one year is 200 dollars; for one term, 120 dollars; and, for single courses, special fees. Payment is made in advance.

Students of regular standing in any one department of Harvard University have a right to attend lectures, recitations, and examinations in any other departments without paying additional fees.

UNIVERSITY OF PENNSYLVANIA.

THE Medical Department of this University is the oldest medical school in America, having been established in 1765 by Drs. John Morgan and William Shippen, on the plan of the University of Edinburgh, of which the founders were graduates. The following are the professors of the faculty as at present constituted:—Dr. W. Pepper, Provost of the University and *ex officio* President of the Faculty; Dr. H. H. Smith (Surgery—*Emeritus*); Dr. Joseph Leidy (Anatomy); Dr. Richard A. F. Penrose (Obstetrics and Diseases of Women and Children); Dr. William Osler (Theory and Practice of Medicine, and Clinical Medicine); Dr. D. Hayes Agnew (Surgery and Clinical Surgery); Dr. William Pepper (Clinical Medicine); Dr. William Goodell (Clinical Gynæcology); Dr. James Tyson (General Pathology and Morbid Anatomy); Dr. Horatio C. Wood (Materia Medica, Pharmacy, and General Therapeutics); Dr. Theodore G. Wormley (Chemistry); Dr. John Ashhurst, jun. (Clinical Surgery); Dr. Harrison Allen (Physiology); also the following clinical professors of special subjects:—Dr. W. F. Norris (Diseases of the Eye); Dr. G. Strawbridge (Diseases of the Ear); Dr. L. A. Duhring (Diseases of the Skin).

The curriculum is arranged as follows:—*First Year:* Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, General Clinics—Medical and Surgical. Final Examinations in General Chemistry, Materia Medica, and Pharmacy. *Second Year:* Anatomy, Topographical Anatomy, Medical Chemistry, Physiology, General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, General Clinics—Medical and Surgical. Final examinations in Anatomy, Medical Chemistry, and Physiology. *Third Year:* General Pathology and Morbid Anatomy, Topographical Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children; Gynæcology, Bedside Instruction in Practical Medicine (including Physical Diagnosis), Bedside Instruction in Practical Surgery, Practical Ophthalmology, Practical Otology, Practical Dermatology, Practical Electro-Therapeutics, General Clinics—Medical and Surgical. Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children). Final examinations for degree at the end of the course. General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children. Opportunities for practical work in the physiological laboratory will be afforded to those who desire them. A separate fee is charged.

No beneficiary students are received, nor students at reduced rates, except in the case of the six successful applicants for the scholarships created by the board of trustees. These are open to competitive examination. Candidates must furnish satisfactory evidence that they are without the means to defray the expenses of a medical education. They must also write a brief autobiography, which will serve as a test of their qualifications in orthography and grammar; and pass an examination in a Latin prose translation (first three books of Cæsar), and an examination in elementary physics. This examination is held annually in September.

The Faculty have established a post-graduate course, which embraces various special departments. The teaching consists in bedside and dispensary lessons, the treatment, examination of patients, and the use of instruments of precision in the diagnosis and treatment of disease.

The Laboratory Building is a spacious building of four floors: the first being devoted to operative dentistry; the second and third are fitted up as chemical laboratories; while the fourth contains apartments for physiological, histological, and pathological investigation. There are also a pharmaceutical laboratory, and one of experimental therapeutics. The attendance of the students upon the laboratory courses is compulsory. Before commencing dissecting the student is obliged to attend the osteo-syndesmological laboratory, in order to make himself familiar with the skeleton. The following are the requirements for graduation.

Students who have attended one course in a regular medical school (homœopathic and eclectic schools are not recognised) will be admitted as students of the second course in the University, after having satisfactorily passed an examination in General Chemistry and Materia Medica and Pharmacy. Students who have attended two courses in a regular medical school will be admitted as students of the third course after having satisfactorily passed an examination in General and Medical Chemistry, Materia Medica and Pharmacy, Anatomy, and Physiology. Graduates of other regular medical schools in good standing will be admitted as students of the third course without an examination. Graduates of Colleges of Pharmacy and Dental Colleges in good standing are admitted to the second course without an examination.

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character. He must have studied medicine for three years, and have attended at least his last course of instruction in this school, have prepared a satisfactory thesis, and have passed the required examinations. Candidates who have not been successful upon a first examination will be permitted to have a second before the June commencement. The commencement for conferring the degree of Doctor of Medicine is held on the 15th day of March, unless that day should fall on a Saturday or Sunday, when it is held on the preceding Friday. The degree will not be conferred upon a candidate who absents himself from the public commencement, except by special permission of the Medical Faculty.

The entire College expenses for the three years' course is 435 dollars, including matriculation and graduation fees.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

THE fifty-ninth Session of this College will begin on October 1, and continue till the end of March 1886. The lectures will be delivered by the following professors: Dr. Roberts Bartholow (Materia Medica, General Therapeutics, and Hygiene); Dr. Henry C. Chapman (Institutes of Medicine and Medical Jurisprudence); Dr. J. M. Da Costa (Practice of Medicine); Dr. W. H. Pancoast (Anatomy); Dr. Robert E. Rogers (Medical Chemistry and Toxicology); Dr. S. W. Gross (Principles of Surgery and Clinical Surgery); Dr. J. H. Brinton (Surgery and Clinical Surgery); Dr. T. Parvin (Obstetrics and Gynæcology); Dr. W. Thomson (Ophthalmology).

A spring course of Supplementary Lectures is given, beginning early in April and ending early in June. There is no additional charge for this course to matriculates of the College, except a registration fee of 5 dollars; non-matriculates pay 40 dollars, 35 of which is, however, credited on the amount of fees paid for the ensuing Winter Course.

To each course of the regular curriculum there is appended a laboratory course, carried on in large and thoroughly equipped apartments in the college, by specially appointed Demonstrators, under the immediate direction of the Professor. In this way each candidate for the degree of M.D. is immediately and personally taught in obstetrics and gynæcology, physical diagnosis, laryngology, ophthalmology, medical chemistry, pharmacy, materia medica and experimental therapeutics, physiology, histology and experimental physiology, and minor surgery, bandaging, operations on the cadaver, &c. In the department of medicine there are clinical conferences and practical lessons in physical diagnosis. This course of instruction is *free of charge, but obligatory upon* candidates for the degree, except those who have had such instruction and those who are graduates of other colleges of ten years' standing.

A *Post-graduate Course* has been organised for practitioners.

Clinical Instruction is given throughout the year at the Hospital of Jefferson Medical College.

A candidate for the degree of M.D. must be of good moral character, and at least 21 years of age. He must have studied medicine for not less than three years, and have attended at least two full winter sessions of lectures, one of which must have been in this College. At least one course of Practical Anatomy and one of Clinical Instruction must have been attended; and he must present a thesis, of his own composition and in his own handwriting, on some medical subject. No honorary degrees in medicine are granted.

The *Fees* are: for a full Course, 140 dollars; Matriculation Fee (paid once only), 5 dollars; Practical Anatomy, 10 dollars; Graduation Fee, 30 dollars; for a full course of Lectures to those who have attended two full courses at other recognised Colleges, the Matriculation Fee and 70 dollars; to Graduates of other Colleges, of less than ten years, the Matriculation Fee and 70 dollars.

COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.

THIS is otherwise known as the Medical Faculty of Columbia College. The instruction is given by the following professors, &c.: Dr. J. C. Dalton (Physiology and Hygiene)—*Emeritus*: Dr. Alonzo Clark (Pathology and Practical Medicine)—*Emeritus*: Dr. J. G. Curtis (Physiology and Hygiene); Dr. T. M. Markoe (Principles of Surgery); Dr. T. Gaillard Thomas (Clinical Gynæcology); Dr. J. T. Metcalfe (Clinical Medicine)—*Emeritus*: Dr. H. B. Sands (Practice of Surgery); Dr. J. W. McLane (Obstetrics and the Diseases of Children); Dr. T. T. Sabine (Anatomy); Dr. C. E. Chandler (Chemistry and Medical Jurisprudence); Dr. E. Curtis (Materia Medica and Therapeutics); Dr. F. Delafield (Pathology and Practical Medicine); Dr. Wm. Detmold (Military and Clinical Surgery)—*Emeritus*: Dr. W. H. Draper (Clinical Medicine); Dr. Cornelius R. Agnew (Diseases of the Eye and Ear); Dr. Abraham Jacobi (Clinical, Diseases of Children); Dr. Fessenden N. Otis (Clinical, Venereal Diseases); Dr. E. C. Seguin (Diseases of the Mind and Nervous System); Dr. G. M. Lefferts (Clinical, Laryngoscopy and Diseases of the Throat); Dr. G. H. Fox (Clinical, Diseases of the Skin); Dr. G. L. Peabody (Clinical Medicine); Dr. A. B. Ball (Clinical Medicine); Dr. Halsted (Demonstrator of Anatomy); Dr. Prudden (Director of the Pathological Laboratory).

The Collegiate Year consists of a regular Winter Session, attendance upon which is required for the graduation.

Candidates for the Degree of Doctor of Medicine must have attended two full courses of lectures on Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Obstetrics, Surgery, Pathology, and Practical Medicine; the second course must have been given in this College. Students are permitted—and are recommended—to complete the two full courses by attendance during three or more sessions, taking only certain branches in each session. Candidates must have studied Practical Anatomy during one winter session; have been engaged during three years in the study of medicine under a regular physician or surgeon; have attained the age of 21 years; and be of good moral character. Each candidate must present a thesis on some medical subject, and pass an examination in the seven branches of medical science above mentioned.

Students who have attended two courses of lectures (one being at this College) on Anatomy, Physiology, and Chemistry, may be examined on these subjects at the end of their second course; and the examination, if satisfactory, is accounted final.

Students and graduates of other schools are admitted under special regulations.

The fees are: Yearly matriculation, 5 dollars; Course of Lectures each Session, 140 dollars, or 20 dollars for each course; Practical Anatomy, 10 dollars; and graduation fee, 30 dollars.

UNIVERSITY OF THE CITY OF NEW YORK.

The Professors in the Faculty of Medicine are: Dr. Alfred C. Post (Clinical Surgery)—*Emeritus*: Dr. Charles I. Pardee (Diseases of the Ear); Dr. John C. Draper (Chemistry); Dr. Alfred L. Loomis (Pathology and Practice of Medicine); Dr. A. Ranney (Anatomy); Dr. W. H. Thomson (Materia Medica and Therapeutics, and Diseases of the Nervous System); Dr. J. W. S. Arnold (Physiology and Histology—*Emeritus*); Dr. J. Williston Wright (Surgery); Dr. Fanueil D. Weisse (Practical and Surgical Anatomy); Dr. W. M. Polk (Obstetrics and Diseases of Women and Children); Dr. L. A. Stimson (Physiology and Histology); Dr. R. Witthaus (Physiological Chemistry); Dr. Stephen Smith (Clinical Surgery); Dr. A. E. Macdonald (Medical Jurisprudence and Diseases of the Mind); Dr. H. Knapp (Ophthalmology); Dr. S. O. Vanderpoel (Public Hygiene). There are also six clinical professors: viz., Dr. Drake (Medicine); Dr. Shaffer (Orthopædic Surgery); Dr. Morrow (Dermatology); Dr. Winters (Diseases of Children); Dr. Piffard (Dermatology); and Dr. Jarvis (Laryngology).

The Collegiate Year is divided into three Sessions: a Preliminary Session, a Regular Winter Session, and a Spring Session.

The Regular Winter Session will begin September 30, 1885, and end about the middle of March 1886. The Plan of Instruction consists of Didactic and Clinical Lectures, recitations, and laboratory work in all subjects in which it is practicable.

In addition to the ordinary clinics, special clinical instruction, without additional expense, will be given to the candidates for graduation during the latter part of the Regular Session in the Wards of the Hospitals and at the Public and College Dispensaries.

Each of the seven Professors of Chemistry, Medicine, Anatomy, Materia Medica, Physiology, Surgery, and Obstetrics, will in one evening in each week conduct a recitation on his subject.

The Spring Session will begin about the middle of March and end the last week in May. The daily Clinics and Special Practical Courses will be the same as in the Winter Session, and there will be Lectures on Special Subjects by the Members of the Faculty. It is supplementary to the Regular Winter Session. Nine months of continued instruction are thus secured to all students of the University who desire a thorough course.

Fees.—These are: for Course of Lectures, 140 dollars; Matriculation, 5 dollars; Demonstrator's Fee (including material for dissection), 10 dollars; final Examination Fee, 30 dollars.

BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

The teaching staff of the College consists of the following professors: Dr. Isaac E. Taylor (Obstetrics and Diseases of Women)—*Emeritus*: Dr. Fordyce Barker (Clinical Midwifery and Diseases of Women); Dr. B. W. McCready (Materia Medica and Therapeutics and Clinical Medicine)—*Emeritus*: Dr. Austin Flint (Principles and Practice of Medicine, and Clinical Medicine); Dr. F. S. Dennis (Principles and Practice of Surgery and Clinical Surgery); Dr. Lewis A. Sayre (Orthopædic Surgery and Clinical Surgery); Dr. Alexander B. Mott (Clinical and Operative Surgery); Dr. Wm. T. Lusk (Obstetrics and Diseases of Women and Children, and Clinical Midwifery); Dr. A. A. Smith (Materia Medica and Therapeutics, and Clinical Medicine); Dr. Austin Flint, jun. (Physiology and Physiological Anatomy); Dr. Joseph D. Bryant (Anatomy and Clinical Surgery); Dr. R. Ogden Doremus (Chemistry and Toxicology); Dr. Edward G. Janeway (Diseases of the Nervous System and Clinical Medicine, and Associate Professor of Medicine); Dr. Henry D. Noyes (Ophthalmology and Otology); Dr. John P. Gray (Psychological Medicine and Medical Jurisprudence); Dr. Beverly Robinson (Clinical Medicine); Dr. Edward L. Keyes (Cutaneous and Genito-Urinary Diseases); Dr. J. L. Smith (Diseases of Children); Dr. F. H. Bosworth (Diseases of the Throat); Dr. C. A. Doremus (Adjunct to Chair of Chemistry and Toxicology); also the following lecturers: Dr. L. M. Yale (Adjunct, Diseases of Children); Dr. C. S. Bull (Adjunct, Ophthalmology and Otology).

The Collegiate Year in this Institution embraces the Regular Winter Session, and a Spring Session. The Regular Session begins on Wednesday, September 23, 1885, and ends about the middle of March 1886. In addition to four didactic lectures on every week-day except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation. The Spring Session consists chiefly of recitations from text-books. This Session begins about the middle of March, and continues until the middle of June. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

Fees.—For the Regular Session: Tickets to all the Lectures, Clinical and Didactic, 140 dollars; for Students who have attended two full courses at other Medical Colleges, and for Graduates of less than three years' standing of other Medical Colleges, 70 dollars; Matriculation fee, 5 dollars; Dissection fee (including material for dissection), 10 dollars; Graduation fee, 30 dollars; no fees for Lectures are required of Graduates of three years' standing, or of third-course Students who have attended their second course at the Bellevue Hospital Medical College. For the Spring Session: Matriculation (ticket valid for the following winter), 5 dollars; Recitations, Clinics, and Lectures, 40 dollars; Dissection (ticket valid for the following winter), 10 dollars.

The Matriculation Examination consists of English composition; Grammar, an examination upon the above-mentioned composition; Arithmetic, including vulgar and decimal fractions; Algebra, including simple equations; Geometry, first two books of Euclid. This examination will be waived for those who have received the degree of A.B., those who have passed the freshman examination for entrance into any incorporated literary college, those who have passed a matriculation examination at any recognised medical college or at any scientific school or academy in which an examination is required for admission.

NEW YORK POST-GRADUATE SCHOOL.

In 1882 there was founded in New York an institution under this name, for the purpose of giving instruction in medical science and practice to gentlemen who had obtained degrees in medicine.

No undergraduates are admitted, and no degrees are conferred, but the School is open to all legalised practitioners, and it is specially available for the young graduate who wishes to acquaint himself with the practical duties of his profession, or for older practitioners who are desirous of taking up some special branch of medicine, or who wish to familiarise themselves with the modern advances in diagnosis and treatment. The instruction is given by means of clinics, subjects, and specimens. There are no lectures except clinical lectures, and no demonstrations without subjects and specimens.

The Dispensary, and the Hospitals to which the Instructors are attached, furnish more than 16,000 patients annually, for the illustration of General Medicine and Surgery, Mental and Nervous Diseases, Gynæcology, Obstetrics, Genito-Urinary Diseases, Cutaneous and Syphilitic Affections, Orthopædic Surgery, Diseases of Children, Diseases of the Eye and Ear, and of the Throat and Nose. The new Anatomical room provides for studies in Practical Anatomy and Operative Surgery on the dead body. Practical Pharmacy and Medical Chemistry are taught in the Chemical and Pharmaceutical Laboratories. The new Histological and Pathological Laboratory is also most thoroughly equipped. In the Department of Applied Anatomy, instruction is given on living models, as well as on the dead subject. In addition to the above, the various members of the Faculty hold positions and give instruction in various hospitals and dispensaries.

Each department of the School is open throughout the entire year, and special facilities are given to those who desire to prosecute any line of study, at any time.

The year is divided into two Terms, the *Regular* and the *Intermediate*. During the Regular Term, instruction is carried on by the Professors, Associate Professors, and Lecturers. There is but one course, of four months, in the Intermediate Term. A daily clinic is held throughout this period.

Practitioners may enter the School at any time, and take one or more courses of seven weeks' duration, in any department. Special advantages are secured by those who take several courses or pursue continuous studies. Candidates for the *Army* and *Navy* will have special instruction in Civic, Naval, and Military Hygiene, Examination of Recruits, &c.

The Faculty of the School is constituted as follows: Dr. William A. Hammond (Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity); Dr. D. B. St. John Roosa (Professor of the Diseases of the Eye and Ear, President of the Faculty); Dr. Frederic R. Sturgis (Professor of the Diseases of the Skin and Genito-Urinary Organs, and of Venereal Diseases); Dr. Clinton Wagner (Professor of the Diseases of the Nose and Throat); Dr. Thomas E. Satterthwaite (Professor of Pathology and General Medicine); Dr. Charles L. Dana (Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity); Dr. M. Josiah Roberts (Professor of Orthopædic Surgery and Mechanical Therapeutics); Dr. Alexander J. C. Skene (Professor of the Diseases of Women); Dr. Andrew H. Smith (Professor of Clinical Medicine and Therapeutics); Dr. William O. Moore (Professor of the Diseases of the Eye and Ear); Dr. William F. Fluhrer (Professor of Clinical Surgery); Dr. Bache McE. Emmet (Professor of Diseases of Women); Dr. Edward Kershner (Professor of Naval, Military, and State Hygiene); Dr. Ambrose L. Ranney (Professor of the Anatomy and Physiology of the Nervous System); Dr. William H. Porter (Professor of Clinical Medicine and Pathology); Dr. George H. Fox (Professor of the Diseases of the Skin); Dr. Stephen S. Burt (Professor of Physical Diagnosis); Dr. Seneca D. Powell (Professor of Minor Surgery); Dr. C. A. Von Ramdohr (Professor of Obstetrics); Dr. Horace T. Hanks (Professor of Diseases of Women); Dr. Lewis S. Pilcher (Professor of Clinical Surgery); Dr. Herbert G. Lyttle (Associate Professor of Genito-Urinary Diseases, and of Venereal Diseases); Dr. Graeme M. Hammond (Associate Professor of the Diseases of the Mind and Nervous System); Dr. J. R. Nilson (Associate Professor of Diseases of Women); Dr. G. B. Hope (Associate Professor of Diseases of the Nose and Throat).

CANADA.

MEDICAL EXAMINING BODIES.

The following are the Medical Examining Bodies and Schools in the Dominion of Canada.

Ontario.—Toronto School of Medicine, affiliated with the University of Toronto and the University of Victoria College; Trinity Medical School, affiliated with the Universities of Trinity College, Toronto, and Manitoba; Royal College of Physicians and Surgeons, affiliated with the Queen's University; Medical Department of the Western University, London; Women's Medical College, Toronto; Women's Medical College, Kingston, affiliated with Queen's University.

Quebec.—Medical Department of McGill University; Ecole de Médicine et de Chirurgie, affiliated with the University of Victoria; Medical Department of Laval University; Faculty of Medicine, University of Bishop's College.

Nova Scotia.—Halifax Medical College.

Manitoba.—Manitoba Medical College, affiliated with the University of Manitoba.

Practitioners of Medicine in Canada must be registered. The possession of a degree of Doctor of Medicine, granted by a recognised University, entitles its holder to registration in all the provinces except Ontario. In Quebec, it is optional with the Provincial Board to accept or reject the degree of an University outside the province, and sometimes its holder is required to undergo an examination. In Ontario, all except registered practitioners of Great Britain must pass an examination before registration. Graduates of American Medical Schools, in order to register must, unless holding an academical degree, (1) pass a matriculation examination;

(2) attend a Canadian school one or more winter courses, so as to complete the curriculum of the province; (3) pass a professional examination. In Manitoba, however, all that is required of American graduates is a practical examination in the several branches of Medicine.

UNIVERSITY OF TORONTO.

THE degree of Bachelor of Medicine may be obtained, either (1) by taking a Pass Course, or (2) by taking an Honour Course.

Candidates must pass the Matriculation Examination unless (1) they possess a Degree in Arts, not being an Honorary Degree, from any Dominion or British University; or (2) they have already matriculated in the Faculty of Arts, or in the Faculty of Law in this University. They must also produce satisfactory certificates of good conduct, and of having completed the sixteenth year of their age. The Matriculation Examination (both Pass and Honours (commences in the latter part of June, and Supplemental Examinations (Pass alone) are held in the latter part of September, when those who were rejected in June, as well as new candidates, may present themselves. Candidates on giving notice of intention to present themselves must signify whether they propose taking the Pass or the Honour Examination. Scholarships are only awarded in connection with the latter. The following groups of subjects must be passed: (1) Two out of four languages—Latin, Greek, French, and German—one of which must be Latin; (2) Mathematics, including Arithmetic, Algebra to the end of Quadratics, and the first three books of Euclid; (3) English Grammar, Composition, and Dictation, with the Outlines of English History and the Geography of America and Europe.

Undergraduates must attend lectures and receive practical instruction during four years, at a recognised School of Medicine. Each undergraduate, at the end of each of the four years, must present himself at the Annual Examination. These examinations are styled the first, second, third, and fourth Professional Examinations, and are to be passed by all candidates for the Degree. Graduates in Arts of this University, with honours in the department of Natural Sciences, are exempted from the First Professional Examination, and from the fee for the same. They must, however, take Anatomy along with the Second Professional Examination.

The following are the certificates required for the different examinations, and the subjects of examination.

First Professional Examination.—Certificates are required: 1. Of Matriculation; 2. Of having attended a course of lectures on each of the following subjects: Anatomy, 100 lectures; Physiology and Inorganic Chemistry, each 60 lectures; Natural Philosophy, 20 lectures; Botany and Zoology, each 30 lectures. 3. Of practical instruction in Anatomy during six months.

Second Professional Examination.—Candidates must produce certificates: 1. Of having attended lectures on Anatomy, Physiology, Materia Medica, and Therapeutics, each 100 lectures; Organic Chemistry; 2. Of Practical Instruction in Anatomy (a second course of six months); Histology and Physiological Chemistry, each during three months; 3. Of having dissected the human body once; 4. Of being skilled in Compounding and Dispensing Drugs.

Third Professional Examination.—The candidates must produce evidence: 1. Of having attended lectures on Practice of Medicine, Surgery, and Obstetrics, each 100 lectures; Clinical Surgery and Medicine and General Pathology, each 50 lectures; 2. Of having dissected the human body a second time; 3. Of Practical Instruction in Pathological Histology during three months.

Fourth Professional Examination.—Candidates must produce evidence: 1. Of having attended lectures on:—Clinical Medicine and Surgery, and Forensic Medicine, each 50 lectures; Hygiene, 25 lectures; Medical Psychology, 12 lectures; 2. Of Practical Instruction in Chemistry in its application to Hygiene and Forensic Medicine; 3. Of having attended at least six clinics in a Public Lunatic Asylum; 4. Of having conducted at least six Labours; 5. Of proficiency in Vaccination; 6. Of attendance in the wards of a Public Hospital accommodating not less than 100 beds during eighteen months; 7. Of attendance for six months on the out-practice of a Hospital, Dispensary, or registered Practitioner; 8. Of having attended twelve Necropsies.

Candidates for Honours are entitled to First Class Honours in any of the Professional Examinations if they obtain 75 per cent. of the aggregate marks; those who obtain 66 per cent. will be entitled to Second Class Honours. Extra papers on all the Pass Subjects will be set for Honour Candidates, as well as papers on certain extra Honour subjects, viz. Comparative Anatomy of the Vertebrata, Natural Philosophy, the Physiology of Nerve, Muscle, Circulation, &c. Candidates proceeding to the Degree of M.B. by taking the Honour Courses are grouped in two classes. Those receive the Degree with First Class Honours who have been placed in the First Class Honour List in the second, third, and fourth Professional Examinations. Those receive their Degree with Second Class Honours who have been placed in the Honour List in the second, third, and fourth Professional Examinations.

Scholarships, &c.—The following Scholarships are annually offered for competition: At Matriculation, one of 100 dollars and one of 50 dollars; at each of the first three Professional Examinations, one of 120 dollars and one of 80 dollars. The First Year Scholarships are not open to Graduates in Arts with Honours in the Department of Natural Sciences. No Professional Scholarship will be awarded to any Candidate who has not obtained First Class Honours in the Examination for which it was conferred. Each Scholarship is tenable for one year only, but the Scholar of one year is eligible for the Scholarship of a succeeding year. A gold medal and three silver medals are offered annually for competition among the Undergraduates who have obtained the degree of M.B., with First Class Honours, and are awarded according to the percentage of marks in the aggregate results of the second, third, and fourth Professional Examinations; but the gold medal is only awarded on the special recommendation of the Examiners. Prizes, each of the value of 10 dollars, in books, may be awarded annually among Undergraduates in Law, Medicine, and Arts, for the best Composition in Greek Verse, Greek Prose, Latin Verse, Latin Prose, English Verse, English Prose, French Prose, or German Prose. Certificates of Honour will be given to those students who, at any of the Examinations, have been placed in the First Class in Honours in any Department. One gold and two silver medals, called the 'Starr Medals,' are conferred upon the three Bachelors of Medicine who have attained, in the course of their Annual Professional Examinations, the highest marks in the following subjects: Anatomy for the first and second years, and in Surgical Anatomy of the third year; Physiology for the first and second years, and Histology, Physiological Chemistry and Practical Physiology of the second year; General Pathology and in Morbid Anatomy and Histology of the third year. Every recipient of the medal must have attained the standing of First Class in each of the above-mentioned subjects, and must have been classed in Honours in the Fourth Professional Examination.

Degree of M.D.—Candidates for the Degree of M.D. must be of one year's standing from admission to the Degree of M.B., and must have composed an approved thesis upon some medical subject.

Fees.—The fees are: Matriculation, 5 dollars; each Professional Examination, 2 dollars; a rejected candidate may present himself at the same examination in the following year on payment of 1 dollar. Degree of M.B., 6 dollars; Degree of M.D., 8 dollars.

UNIVERSITY OF TRINITY COLLEGE.

THE following are the requisites for admission to the Degree of Doctor of Medicine and Master of Surgery in this University.

The candidate must have passed the Matriculation Examination in Arts or Medicine of Trinity College, or of some other recognised University, or that of the College of Physicians and Surgeons of Ontario or Quebec, or that of the Law Society of Upper Canada, or an examination equivalent to any of the above. The subjects of the Medical Matriculation Examination are: Writing and Dictation; English Language; Arithmetic; Algebra (including Simple Equations); Geometry (first Two Books of Euclid); Latin (Translation and Grammar); Greek (Translation and Grammar) or Natural Philosophy; and one of the following subjects: Greek, French, German, Scripture History, or Natural Philosophy.

The candidate must produce a satisfactory certificate of good conduct, must be 21 years of age, and must have regularly attended lectures extending over four winter sessions, or have studied one year with a medical practitioner, and have subsequently attended lectures during three winter sessions. He must have attended not less than two courses of six months each on Anatomy, Practical Anatomy, Medicine, Surgery, Chemistry, Midwifery and Diseases of Women and Children, Materia Medica and Therapeutics, and Physiology, including Histology: two three months' courses on Medical Jurisprudence, and one course of three months of Practical Chemistry, including Toxicology, Botany, and Sanitary Science respectively. He must also have attended for at least eighteen months the practice of some General Hospital, and have attended, during two sessions, Clinical Lectures on Medicine and Surgery; and, for at least six months, the practice of a Lying-in Hospital; or he must have otherwise enjoyed equivalent obstetrical advantages, with attendance upon at least six cases of Labour.

The examinations are Primary and Final. The Primary Examination embraces Descriptive Anatomy, Physiology, including Histology, General Chemistry and Chemical Physics, Practical Chemistry, Botany, Materia Medica and Therapeutics, and Toxicology. It may be passed at the close of the second year.

The Final Examination embraces Theory and Practice of Medicine, including Medical Pathology, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Sanitary Science. It takes place at the close of the fourth year.

Should the candidate desire it, he may undergo his entire examination in all the branches at the end of the fourth year. The examinations are held annually in the spring.

Candidates having passed an examination equivalent to the Primary, are required to pass only the Final, but pay the full fee.

Fees.—These are: Primary Examination, 10 dollars; Final ditto, 14 dollars. Full Fee, including all College Examinations, 24 dollars. Candidates rejected at either the Primary or the Final Examination have the fee returned, less 5 dollars.

TRINITY MEDICAL SCHOOL.

THIS School is in affiliation with the University of Trinity College; also with the Universities of Toronto and Manitoba; and is recognised by the Royal Colleges of Physicians and Surgeons of Great Britain, and by the Corporate Examining Boards in London and Edinburgh.

The Faculty consists of the following professors: Dr. W. B. Geikie (Medicine and Clinical Medicine); Dr. J. Fulton (Surgery and Clinical Surgery); Dr. J. E. Kennedy (Materia Medica and Therapeutics); Dr. H. Robertson (Anatomy); Dr. J. A. Temple (Obstetrics and Diseases of Women and Children); Mr. T. Kirkland (General Chemistry and Botany); Dr. C. W. Covernton (Sanitary Science); Dr. F. Le M. Grasett (Medical Jurisprudence); Dr. W. T. Stuart (Practical Chemistry); Dr. C. Sheard (Physiology and Histology); Dr. G. S. Ryerson (Lecturer on the Eye, Ear, and Throat); Dr. L. Teskey (Demonstrator of Anatomy); Dr. G. A. Bingham (Assistant Demonstrator of Anatomy); Mr. T. M. Hardie (Teacher of Biology, Zoology, &c.).

Students are advised, before entering upon their medical studies, to pass the Matriculation Examination of the Medical Council of Ontario—viz.: The *third* non-Professional Examination with Latin, which is accepted by Trinity Medical School, and by the University of Trinity College. The Examination includes English Grammar, English Literature, Composition, Dictation, Arithmetic, Algebra and Euclid, History and Geography, Latin. Evidence of having passed the Matriculation Examination in any British or Colonial University, or that required by the Medical Council or by the various Colleges of Physicians or Surgeons in Great Britain and Ireland, or that of the College of Physicians and Surgeons of Quebec, or that of the Law Society of Ontario or Quebec, or having passed an examination recognised as equivalent to any of the above, is also accepted by Trinity Medical School, and by the University of Trinity College. Non-matriculated students from the Maritime Provinces, Manitoba, and the North-West, the West Indies, or other British Colonies, the United States, or from any quarter, who do not take the Council's examinations, are admitted to attend lectures in the School. But if such desire to graduate at Trinity College, they must present themselves for the Trinity University Medical Matriculation Examination in October or March. Students who are not graduates or matriculates in Arts, who desire to graduate in the University of Toronto, must take the Medical Matriculation of that institution.

The matriculation of the Universities may be passed at any time before graduation.

The Toronto General Hospital has a large number of patients in the wards, who are visited daily by the medical officers in attendance. The attendance of out-door patients daily is also very large. The Fever Hospital, the Burnside Lying-in Hospital, and the Eye and Ear Hospital are also in the same grounds. The Toronto Dispensary is open to students free of charge.

Daily Clinical instruction is given by members of the Hospital Staff on all interesting cases, Medical and Surgical. Special Clinical instruction is also given by the Professors of Midwifery at the Burnside Hospital, and by other members of the Staff of the Hospital, on Diseases of Women and Children, and on Practical Midwifery, and special Practical Instruction at the Eye and Ear Department of the Hospital is also regularly given, as well as on Dermatology.

Professional Examinations will be conducted at the close of the first, the second, and the last sessions, to be known as the *First Year's*, the *Primary*, and the *Final* Examinations, respectively.

1. *First Year.*—Anatomy of the Bones, Ligaments, Muscles, also the Viscera of the Abdomen and Thorax. All candidates for this examination must present a certificate of having dissected an upper and a lower extremity. The Physiology of the Elementary Tissues, also of Respiration, Circulation, and Digestion. Inorganic Chemistry, including chemical theory. Physics: heat, light, and electricity. Botany.—A supplementary first year's examination will be held on the first Saturday in November.

2. *Primary.*—Descriptive Anatomy, Physiology and Microscopical Anatomy, Chemistry, Theoretical and Practical, Toxicology, Botany (when not passed at the end of the first year), and Materia Medica. The primary examination may be passed at the close of the second winter session.

3. *Final.*—Theory and Practice of Medicine and Medical Pathology, Principles and Practice of Surgery, including Surgical Anatomy, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Sanitary Science. Should the candidate desire it, he may undergo his entire examination in all the branches at the end of the last session.

Certificates of Honour are awarded annually in all the professional examinations, to candidates who obtain not less than 75 per cent. of the total number of marks.

Scholarships and Medals.—Five scholarships are offered for competition in this school as follows. Three First Year's Scholarships will be competed for at the close of the first session. The value of these scholarships is 50, 30, and 20 dollars respectively. Two Second Year's Scholarships are open to competition, at the close of the second winter session, to all students who have taken out their entire primary course at this school. The value of these scholarships is 50 and 30 dollars respectively. Scholarships are awarded only to the candidates who stand highest in the Honour lists. A gold and two silver medals are open to competition annually, at the close of their last session, by students undergoing examination in the school in the final branches.

Fellowship Diplomas.—Under the authority of the Special Act of the Legislature, incorporating the school, diplomas are awarded at the close of the final examination to candidates whose standing has been sufficiently high to merit them.

Candidates for examination for the School Fellowship Diploma must have passed a recognised matriculation examination, and spent four years in pursuit of medical studies, and attended at least two full courses of lectures during either three or four winter sessions. A certificate of good moral character is required.

Appointments open to Students.—The Board of Trustees of the Toronto General Hospital annually appoint two students of the school as hospital assistants. The members of the Faculty who belong to the acting hospital staff each appoint two or more students to act as clinical clerks and dressers, whose duties are to take notice of the cases under treatment, and to carry out such directions as they may receive from the Professors. These positions are tenable for three months.

There are appointed annually two students who have distinguished themselves as anatomists, as prosectors, who prepare the material required for the lectures on anatomy; also two assistants to aid the demonstrators; and two assistants in physiological demonstration.

Fees.—The following are the fees: Anatomy, Surgery, Practice of Medicine, Obstetrics, Materia Medica, Physiology, General Chemistry, Clinical Medicine and Clinical Surgery, 12 dollars each; Practical Anatomy, Practical Chemistry, Normal Histology and Pathological Histology, 8 dollars each; Medical Jurisprudence, 6 dollars; Botany and Sanitary Science, 5 dollars each; Registration, payable once only, 5 dollars. Optional Branches—Zoology and Medical Psychology, 5 dollars each. All students who pay the fees for two full courses of lectures in any branch, are entitled to a perpetual ticket for that branch except Practical Anatomy, Practical Histology, Normal, or Pathological, and Practical Chemistry, every course of which must be paid for. Botany and Sanitary Science are charged for once only. All fees must be paid in advance. The fees for the school examination are: for each 5 dollars. Hospital fees: Toronto General Hospital, perpetual, 20 dollars; Lying-in Hospital, six months, 5 dollars.

FACULTY OF MEDICINE OF McGILL UNIVERSITY, MONTREAL.

THE Faculty consists of the following professors and lecturers:—Sir William Dawson, LL.D., F.R.S. (Principal, Natural History); Dr. W. Wright (*Emeritus*); Dr. R. P. Howard (Medicine); Dr. Duncan C. McCallum (*Emeritus*); Dr. R. Craik (*Emeritus*); Dr. G. E. Fenwick (Surgery); Dr. Joseph M. Drake (*Emeritus*); Dr. G. P. Girdwood (Chemistry); Dr. George Ross (Clinical Medicine); Dr. T. G. Roddick (Clinical Surgery); Dr. William Gardner (Gynæcology); Dr. F. J. Shepherd (Anatomy); Dr. F. Buller (Ophthalmology); Dr. Arthur A. Brown (Obstetrics); Dr. James Stewart (Materia Medica and Therapeutics); Dr. D. P. Penhallow (Botany); Dr. George Wilkins (Medical Jurisprudence, and Lecturer on Histology); Dr. R. L. Macdonnell (Demonstrator of Anatomy and Lecturer on Hygiene); Dr. T. W. Mills (Lecturer on Physiology); Dr. W. Sutherland (Assistant Demonstrator of Anatomy); Dr. G. W. Major (Instructor of Laryngology); Dr. A. D. Blackader (Instructor of Diseases of Children); Dr. J. B. Howard (Assistant Demonstrator of Anatomy); Dr. R. F. Ruttan (Assistant to the Professor of Chemistry); Dr. W. G. Johnson (Demonstrator of Pathology); Dr. C. E. Cameron (Clinical Instructor to University Maternity Hospital).

The Matriculation Examination comprises the following subjects: English Language (including Grammar and Composition), Arithmetic (including Vulgar and Decimal Fractions), Algebra (including Simple Fractions), Geometry (first two books of Euclid), Latin (Translation and Grammar), and one of the following optional subjects: Greek, French, German, Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts of recognised universities are not required to submit to the Matriculation Examination, and a certificate of having passed this examination before the College of Physicians and Surgeons of Ontario or of Quebec is accepted.

Candidates for the degree of Doctor of Medicine and Master of Surgery must be 21 years of age, must have studied medicine four years, one session being at this school, and must pass the necessary examinations. Graduates in Arts of recognised universities, and students who produce evidence of having studied a year with a physician subsequent to passing the Matriculation Examination, can qualify for examination after attendance on three sessions.

Candidates for the Final Examination must furnish testimonials of attendance on the following courses: Descriptive Anatomy, Practical Anatomy, Chemistry, Materia Medica and Therapeutics, Institutes of Medicine, Physiology, General Pathology, Surgery, Midwifery and Diseases of Women and Children, Medicine, Clinical Medicine, Clinical Surgery—each two six-months' courses; Medical Jurisprudence and Hygiene—one course of six months, or two courses of three months; Practical Chemistry, Botany—each one three-months' course; not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology. Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted. The candidate must have attended during eighteen months the practice of the Montreal General Hospital, or that of some other approved hospital, and have compounded medicines for six months. He must also have attended for at least six months the practice of the University or other approved Lying-in Hospital, and have attended at least six cases of labour.

The examinations at the close of each session are arranged as follows: *First Year.*—Elementary Anatomy and Physiology, Chemistry (Chemical Physics and Chemical Philosophy), Materia Medica, Practical Anatomy, Botany. *Second Year.*—Primary Pass Examination: Anatomy, Practical Anatomy, Physiology, Chemistry, Practical Chemistry, Materia Medica. *Third Year.*—Sessional Examination: Medical Jurisprudence with Toxicology, Hygiene,[*] Medicine, Surgery, Midwifery. *Fourth Year.*—Final Pass Examination: Medicine, Surgery, Midwifery, Clinical Medicine, Clinical Surgery, Medical Anatomy, Surgical Anatomy.

The Sessional Examinations at the close of the first and third years are compulsory. At the Primary Examination at the end of the second year, the student may leave two branches for the third year; in any case, Chemistry and one other must be taken at the end of the second year.

The Collegiate Courses of the School are a Winter Session, extending from the 1st of October to the end of March, and a Summer Session, from the end of the first week in April to the end of the first week in July.

An extensive addition is being made to the Medical Building, which will be ready for occupation on October 1. In the new building there will be Histological, Pathological, Physiological, Chemical and Pharmacological Laboratories, fitted up and furnished with all the necessary instruments and apparatus. Besides considerable additions to the Library and Museum, there will be a special anatomical museum, and also a bone-room. The new building will contain two lecture-rooms, each capable of comfortably seating 300 students, and a demonstration room for classes not exceeding fifty in number.

Students from Ontario and Quebec are advised to pass the Matriculation Examination of the Medical Councils of their respective Provinces before entering upon their studies. Students from the United States and Maritime Provinces must present themselves for the Matriculation Examination of the University on the first Friday of October, or the last Friday of March.

The Montreal General Hospital has an average number of 150 patients in the wards, the majority of the cases being acute. The shipping and large manufactories contribute many accidents and surgical cases. In the out-door department there is a daily attendance of between 75 and 100 patients. Clinical clerkships and dresserships can be obtained on application to the members of the Hospital staff. The University dispensary was established for the purpose of affording to senior students practical instruction in diseases of women. Three other special departments have been added, viz.: Diseases of Children, Diseases of the Skin, and Diseases of the Nervous System. The clinical teaching is conducted in the wards and theatre of the General Hospital, daily, throughout the session. Ample opportunities are afforded to the student to investigate the cases.

The fees, arranged according to years, are as follows:—First year, 69 dollars; second year, 88 dollars; third year, 97 dollars; fourth year, 65 dollars; Hospital Ticket, 8 dollars; Lying-in Hospital (six months), 8 dollars; Matriculation, 5 dollars; Graduation, 30 dollars. All fees are payable strictly in advance.

BISHOP'S COLLEGE UNIVERSITY FACULTY OF MEDICINE, MONTREAL.

THE Faculty consists of the following professors and teachers: Dr. F. W. Campbell (Principles and Practice of Medicine); Dr. J. B. Edwards (*Emeritus*, Practical Chemistry); Dr. R. A. Kennedy (*Emeritus*, Obstetrics and Diseases of Children); Dr. J. Perrigo (Surgery); Dr. J. B. McConnell (Materia Medica and Therapeutics); Dr. Casey A. Wood (Pathology); Dr. G. E. Armstrong (Physiology); Dr. J. C. Cameron (Obstetrics and Diseases of Children); Dr. T. Simpson (Hygiene); Dr. E. H.

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[*] May be taken at the end of the second year.

Trenholme (Gynæcology); Dr. J. J. Gardner (Anatomy); Dr. H. L. Reddy (Medical Jurisprudence); Dr. A. L. Smith (Botany); Mr. J. T. Donald (Chemistry). There are also the following lecturers in special departments: Mr. J. Bemrose (Practical Chemistry); Dr. A. Proudfoot (Diseases of the Eye, Ear, and Throat).

This University confers the degrees of Doctor of Medicine and Master of Surgery. The degree of Master of Surgery (C.M.) is not conferred on any person who does not at the same time obtain the degree of Doctor of Medicine (M.D.) Each student must undergo, prior to the commencement of his medical studies, a Preliminary Examination upon the following subjects: English, French, Latin, Arithmetic, Algebra, Geometry, History, Belles-Lettres, and one of the following optional subjects: Greek, Natural and Moral Philosophy. Candidates for degrees must have been engaged uninterruptedly for four years in medical and surgical study; but a certificate of having studied one full year with a duly licensed practitioner reduces the period of study at the University to three sessions. Students must matriculate afresh at the commencement of every session, on or before the 1st of December. Every candidate for graduation must be 21 years of age, and must give evidence by certificates of having attended: 1. Two six months' courses of lectures on each of the following subjects: (*a*) General or Descriptive Anatomy, Practical Anatomy, Surgery, Medicine, Midwifery and Diseases of Women and Children, Chemistry, Materia Medica, and Therapeutics, Physiology, Clinical Medicine, and Clinical Surgery; (*b*) One six months' course or two three months' courses of Medical Jurisprudence, one six months' course of Pathology, one three months' course of Botany, of Hygiene, and also of Practical Chemistry and Microscopy, and also a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology; Clinical Medicine and Clinical Surgery; courses of Practical Anatomy; (*c*) For the last eighteen months, or three periods of six months each, the medical and surgical practice of a hospital in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons; for at least six months compounding and dispensing medicines; at least six cases of midwifery.

Of the four years of medical and surgical study, one full course on each branch mentioned in sections *a* and *b* must be attended in this University.

Every candidate is examined both in writing and *vivâ voce.* The Examinations are divided into Primary and Final. The Primary Examination comprehends Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, and Botany or Zoology. The Final Examination includes Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Midwifery and the Diseases of Women and Children, Medical Jurisprudence, Pathology, and Hygiene.

Candidates may be admitted to examination on the Primary branches at the end of the third year of their study. The Final Examination does not take place until the candidate has completed his fourth year.

The session of the Faculty will open on Monday, Oct. 5, 1885. Students may attend the practice of either the Montreal General Hospital (200 beds) or of the Hôtel-Dieu Hospital (200 beds). At the Montreal General Hospital facilities are afforded for the study of Practical Pathology, under the direction of the Pathologist of the Hospital. The practice of the Montreal Dispensary is open to the students of Bishop's College. The Woman's Hospital, under the supervision of the Faculty, is divided into two departments—Obstetrical and Gynæcological. The Gynæcological Department is attended by the Professors of Bishop's College, and is the only hospital of its kind in the Dominion. Two gold medals ('The Wood' and the 'Robert Nelson' gold medals) and the 'Dr. David' Scholarship are competed for annually.

Fees.—The fees for the classes of Pathology, Hygiene, Botany, and Practical Anatomy, are 6 dollars each; Medical Jurisprudence. 10 dollars; Practical Histology, 16 dollars; all other classes, 12 dollars each. Degree of Doctor of Medicine and Master in Surgery, 20 dollars; Registration Fee, 1 dollar.

HALIFAX UNIVERSITY AND MEDICAL COLLEGE.

Candidates for the degree of Doctor of Medicine must have attended lectures for at least four years after passing the Matriculation Examination. This examination comprises the following subjects: 1. *Compulsory:* English Language (including Grammar, Composition, and Writing from Dictation); Arithmetic (including Vulgar and Decimal Fractions and the Extraction of the Square Root); Algebra (to the end of Simple Equations); Geometry (first three books of Euclid; Latin (one book, Translation and Grammar); Elementary Mechanics of Solids and Fluids. 2. *Optional:* One of the following subjects: History of England, with questions in Modern Geography; French Translation; German Translation; One Greek Book; History of Nova Scotia; History of the Dominion of Canada. The fee is five dollars, and is not returned in cases of failure. Candidates for this examination must be at least 16 years of age. Graduates in Arts of recognised Universities are not required to pass the Matriculation Examination.

Instruction in medicine in the surgery of a recognised practitioner for one year is received as equivalent to a year of study.

The professional examination is divided into Primary and Final. The former comprises Anatomy, Chemistry, Materia Medica, Physiology and Botany, or Zoology; the latter, Medicine, Surgery, Obstetrics, and Medical Jurisprudence. Candidates may present themselves for the primary examination at the end of the third session, or third year of study.

Candidates for the final examination must produce certificates of having attended two six months' courses each of Anatomy, Chemistry, Materia Medica, Physiology, Surgery, Midwifery, Medicine, Practical Anatomy, Clinical Medicine, and Clinical Surgery; one three months' course each of Practical Pharmacy, Medical Jurisprudence, Botany, and Practical Chemistry; the practice of a recognised Hospital during twelve months; the practice of a Lying-in Hospital for at least six months (or of having attended at least six cases of labour); of having had three months' practice in Dispensing; and of having acquired proficiency in the practice of Vaccination. One session at least must be attended in the Halifax Medical College. Each candidate must present a thesis on some medical or surgical subject, and sign a declaration that he is twenty-one years of age. The examination is oral and written, in all branches; and there is a Clinical Examination in Medicine and Surgery at the bedside.

The fee for the degree of Doctor of Medicine and Master of Surgery is 20 dollars, with a registration fee of 1 dollar.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

ALL persons, whatever qualifications they may possess, must be examined by this College in order to obtain a licence to practise in the province of Ontario.

Candidates for the membership of this College must spend four years (forty-eight months) in professional studies after having passed a matriculation examination in the English Language, Arithmetic, Algebra (including Simple Equations), Geometry (first two books of Euclid), Latin (Translation and Grammar), and either Greek, French, German, or Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts, or students who have matriculated in arts in any University in the British dominions, are not required to pass the Matriculation Examination; and Graduates in Arts may pass the final examination at the end of three years.

Every candidate must have attended, in an university, college, or school of medicine, two courses of six months each (each course consisting of not less than 100 lectures) in Anatomy, Practical Anatomy, Physiology (including Histology), Theoretical Chemistry, Materia Medica and Therapeutics, Medicine, Surgery, Midwifery and Diseases of Women and Children, Clinical Medicine and Clinical Surgery; two courses, of three months each, in Medical Jurisprudence; one course of three months in Practical Chemistry, including Toxicology and Botany; one course of not less than twenty-five demonstrations on Physiological and Pathological Histology; and one course of twenty lectures on Sanitary Science.

The Professional Examination is divided into primary and final. The Primary Examination, at the end of the second or third winter session, comprises Descriptive Anatomy, Physiology and Histology, Theoretical and Practical Chemistry, Toxicology, Materia Medica and Therapeutics, and Botany. (Graduates in Arts who have attended one course of lectures on Botany and two on Theoretical Chemistry, and have passed an examination in these subjects, are not subjected to further examination thereon.) The final examination comprises Medical and Surgical Anatomy, Theory and Practice of Medicine, General Pathology, Surgery and Operative Surgery, Midwifery and Diseases of Women and Children, Operative Midwifery, Medical Jurisprudence, and Sanitary Science.

Before being admitted to the Final Examination the candidate must have spent six months in the office of a regularly qualified medical practitioner in dispensing medicine, have attended the practice of a general hospital for twenty-five months, have attended six courses of Midwifery, and have attained the age of twenty-one years.

The Primary Examination is entirely oral, the Final is entirely written. Any candidate who fails in any one branch at the Primary Examination is held to have failed in all. Any candidate who passes in four or more branches at the Final Examinations, but fails in the others, is required to pass in the latter only at a subsequent examination. Persons intending to practise Homœopathy are, on application, examined by Homœopathic Examiners.

Persons from recognised colleges outside the provinces of Ontario and Quebec must pass the matriculation examination, and afterwards attend one full winter course of lectures during two winter sessions in some one of the Ontario Medical Schools, and such other course or courses as may be necessary to complete the required curriculum; and must pass all the examinations.

The *Fees* are: Registration of Matriculation Examination, 20 dollars; Primary Examination, 20 dollars; Final Examination, including Registration, 30 dollars; Ordinary Registration, 10 dollars; subsequent Registration of Additional Titles, 2 dollars; Diploma of Membership, 5 dollars (free to those who attain membership by examination). No portion of the examination fees is returned to unsuccessful candidates, but such candidates are admitted to one subsequent examination without additional payment.

TEXT-BOOKS.

THE object of the subjoined notes is to inform the student in general terms of the works which he may use as text-books. The list is not intended to be exclusive: nor is it our purpose to say always which book is the best in any subject. Some students learn best from one book, others from another. Again, some books are more adapted than others to the teaching of the school to which the pupil belongs. In addition to the ordinary text-books, reference will be made to some which, though not absolutely necessary to the student, may be studied with advantage.

ANATOMY AND PHYSIOLOGY.

BESIDES the descriptions of the anatomy of the bones in the chief text-books, such as those of Quain and Wilson, there are also some special works on the subject. Among them are Mr. Luther Holden's *Human Osteology* (sixth edition, J. & A. Churchill). The same firm publishes a *Student's Guide to Osteology*, by Mr. Wagstaffe. There is also Mr. Norton's *Osteology for Students* (Baillière, Tindall, & Cox). The anatomy of the joints is especially and ably treated in Mr. Henry Morris's *Anatomy of the Joints of Man* (J. & A. Churchill). For the early study of anatomy, Mr. St. George Mivart's *Elementary Lessons in Anatomy* (Macmillan & Co.) will be found instructive. Among the indispensable text-books treating of human anatomy as a whole are Quain's *Elements of Anatomy* (Longmans & Co.), ninth edition, by Dr. Allen Thomson, Mr. Schäfer, and Mr. Thane; Gray's *Anatomy* (Longmans), tenth edition, by Mr. Pick; and Wilson's *Anatomist's Vade-Mecum*, tenth edition, by Dr. G. Buchanan and Mr. H. E. Clark of Glasgow (J. & A. Churchill). The first volume of a work on *Human Morphology, a Treatise on Practical and Applied Anatomy*, by Mr. H. A. Reeves (Smith, Elder, & Co.), has appeared. For use in the dissecting-room, Ellis's *Demonstrations of Anatomy*, ninth edition (Smith, Elder, & Co.), has long established its claim as a trustworthy guide. It contains reduced copies of plates in the author's *Illustrations of Dissections*, a work which is most valuable for assistance. Other good books for dissectors are Mr. Christopher Heath's *Practical Anatomy*, sixth edition (J. & A. Churchill); Dr. Carrington's *Manual of Dissections of the Human Body* (George Bell & Sons); Holden & Langton's *Manual of Dissection*, fifth edition (J. & A. Churchill); Dr. Cleland's *Directory for the Dissection of the Human Body*, second edition (Smith, Elder, & Co.); a *Dissector's Guide*, with illustrations, by Dr. D. J. Cunningham (Maclachlan & Stewart); and Mr. Bruce Clarke's *Dissector's Manual* (Cassell & Co.). Messrs. Hensman & Fisher's *Anatomical Outlines for the Use of Students in the Dissecting-Room and Surgical Class-Room* (Longmans & Co.) are useful. Treves's *Surgical Applied Anatomy* (Cassell & Co.) and Curnow's *Medical Applied Anatomy*, are useful text-books. Braune's *Atlas of Topographical Anatomy*, translated and edited by Mr. Bellamy (J. & A. Churchill), is a valuable book of reference. The drawings are made from plane sections of foreign bodies. There are also Professor W. Turner's *Atlas of Human Anatomy* (A. Johnston), Bock's *Atlas of Human Anatomy* (Renshaw), Mr. Godlee's *Atlas of Human Anatomy* (J. & A. Churchill), and Allen & Shakespeare's *System of Human Anatomy* (Henry Kimpton); also Mr. Flower's *Diagrams of the Nerves of the Human Body*, third edition (J. & A. Churchill). *A Student's Atlas of Bones and Segments*, by Mr. Cathcart and Mr. Caird (W. & A. K. Johnston), has lately appeared. *A Descriptive Atlas of Anatomy*, by Mr. Noble Smith, has been published by Smith, Elder, & Co. There are also the well-known *Quain and Wilson's Anatomical Plates* (Smith, Elder, & Co.). Mr. Thomas Cooke's *Tablets of Anatomy and Physiology* (second edition) contain much information in a condensed form, and give useful aid in the study of the larger works. To students interested in the study of Zoology and Comparative Anatomy we would recommend, as works that will give much information without being too large or costly, Mr. Flower's *Osteology of the Mammalia* (Macmillan & Co.), and Dr. H. A. Nicholson's *Manual of Zoology* and *Advanced Text-Book of Zoology* (Blackwood); as well as Huxley's *Manuals of the Anatomy of Vertebrated and Invertebrated Animals* (J. & A. Churchill), Huxley and Martin's *Practical Biology*, Dr. Macalister's *Manuals of Zoology of the Invertebrate and of the Vertebrate Animals* (Longmans & Co.), and Mr. F. J. Bell's *Manual of Comparative Anatomy and Physiology* (Cassell & Co.). Professor Gegenbauer's *Elements of Comparative Anatomy*, translated by Mr. F. J. Bell (Macmillan & Co.), is a very complete work. For the study of Embryology, the chapter by Dr. Allen Thomson in Quain's *Anatomy*, or the *Elements of Embryology*, by Dr. M. Foster and Mr. Balfour (second edition, Macmillan & Co.), should be consulted. The subject has been most ably treated by the late Mr. Balfour in a *Treatise on Comparative Embryology* (Macmillan & Co.).

For instruction in Histology, Mr. Schäfer's *Course of Practical Histology* (Smith, Elder, & Co.), Mr. Schäfer's *Essentials of Histology* (Longmans, Green, & Co.), Dr. Stirling's *Text-Book of Practical Histology* (Smith, Elder, & Co.), Dr. Klein's *Elements of Histology* (third edition, Cassell & Co.), and Dr. Heneage Gibbes' *Practical Histology and Pathology* (second edition, H. K. Lewis) are excellent guides; as are also the chapter on General Anatomy in Quain's *Anatomy*, and Dr. Rutherford's *Outlines of Practical Histology* (J. & A. Churchill). The *Atlas of Histology*, by Dr. E. Klein and Mr. Noble Smith (Smith, Elder, & Co.), is a valuable work for reference. Other works which will be found useful are Professor Stricker's collection of essays on *Human and Comparative Histology* (New Sydenham Society), Heinrich Frey's *Histology and Histo-chemistry of Man*, translated by Mr. Barker (J. & A. Churchill), and Dr. Satterthwaite's *Manual of Histology* (Sampson Low & Co.).

In Physiology, the beginner will find trustworthy guides in Huxley's *Lessons in Elementary Physiology* and Huxley and Martin's *Elementary Biology* (both published by Macmillan & Co.); and, as text-books for use in medical schools, Dr. McKendrick's *Outlines of Physiology in Relation to Man* (Maclehose, Glasgow; and Macmillan & Co.), Kirkes's *Handbook of Physiology*, edited by Mr. Morrant Baker and Dr. V. D. Harris (eleventh edition, John Murray), Dr. Michael Foster's *Text-book of Physiology* (fourth edition (Macmillan & Co.), and Dr. Gerald Yeo's *Manual of Physiology* (J. & A. Churchill), and Mr. Power's *Manual of Human Physiology* (Cassell & Co.) are to be recommended; and, for more advanced students, Dr. L. Hermann's *Elements of Physiology*, translated by Professor Gamgee (second edition, Smith, Elder, & Co.), Flint's *Text-book of Human Physiology* (H. K. Lewis), Dr. Landois' *Text-book of Human Physiology*, translated by Dr. Stirling (C. Griffin & Co.), and Dr. Carpenter's *Principles of Human Physiology*, by Mr. Power (ninth edition, J. & A. Churchill). Dr. Pye-Smith's *Syllabus of a Course of Lectures on Physiology* will be found useful for self-examination. The increased study in recent years of Practical Physiology has led to the publication of several guides to this department. Dr. Burdon Sanderson has prepared a manual of *Practical Exercises in Physiology* (second edition, H. K. Lewis). *An Elementary Course of Practical Physiology*, by Dr. M. Foster and Mr. Langley (Macmillan & Co.) is also a book that can be recommended to beginners; while the elaborate *Handbook for the Physiological Laboratory*, by Drs. Sanderson, Klein, Foster, and Brunton (J. & A. Churchill), is more fitted for those who desire an extended knowledge of practical physiology.

As guides in the use of the Microscope, there are Dr. Beale's *Microscope in Medicine*, Dr. Carpenter on the *Microscope* (sixth edition, J. & A. Churchill), Wythe's *Microscopist's Manual* (third edition, J. & A. Churchill), Marsh's *Microscopical Section Cutting* (second edition, J. & A. Churchill), Martin's *Manual of Microscopic Mounting* (second edition, J. & A. Churchill).

CHEMISTRY.

In Chemistry, among the most approved text-books, are Fownes' *Manual of Chemistry*, edited, in two volumes, *Inorganic and Organic*, by Mr. Watts (twelfth edition, J. & A. Churchill); Roscoe's *Lessons in Elementary Chemistry;* Miller's *Elements of Chemistry* (Longmans & Co.); Bloxam's *Chemistry, Inorganic and Organic* (fifth edition, J. & A. Churchill); Williamson's *Chemistry for Students* (Macmillan & Co.); Watts's *Physical and Inorganic Chemistry* (J. & A. Churchill); Tidy's *Handbook of Modern Chemistry* (J. & A. Churchill); and Frankland's *Inorganic Chemistry* (J. & A. Churchill). An elaborate *Treatise in Chemistry*, by Professors Roscoe and Schorlemmer, of Owens College, Manchester, is published by Macmillan & Co. For Practical Chemistry there is a work by Mr. Bloxam on *Laboratory Teaching* (fourth edition, J. & A. Churchill); and one on *Experimental Chemistry*, by Dr. J. E. Reynolds (Longmans & Co.). Bowman and Bloxam's *Practical Chemistry*, eighth edition (J. & A. Churchill) has an established reputation as a practical guide.

For instruction in Physiological and Medical Chemistry, there are Dr. T. C. Charles's *Elements of Physiological and Pathological Chemistry* (Smith, Elder, & Co.) and Dr. Ralfe's *Clinical Chemistry* (Cassell & Co.). Dr. Arthur Gamgee is the author of a *Text-book of the Physiological Chemistry of the Animal Body* (Macmillan & Co.), of which the first volume has been published. As guides in the examinations of urine, there are Dr. Wickham Legg's *Guide to the Examination of the Urine* (sixth edition, H. K. Lewis); and Dr. G. Oliver's *Bedside Urine Testing* (third edition, H. K. Lewis). A second edition of Dr. Thudichum's *Pathology of the Urine* has been published by J. & A. Churchill.

BOTANY.

THE text-books of Botany in most general use are Bentley's *Manual of Botany* (fourth edition, J. & A. Churchill); Bentley's *Student's Guide to Botany* (Churchill); Henfrey's *Elementary Course of Botany*, third edition, by Dr. M. T. Masters (Van Voorst); Balfour's *Manual of Botany* (A. & C. Black); Oliver's *Lessons in Elementary Botany* (Macmillan & Co.); Thome's *Botany*, translated by Bennet; Behrens' *Text-book of General Botany*, translated by Mr. P. Geddes (Y. J. Pentland); Prantl and Vine's *Text-book of Botany*. Sachs' *Text-book of Botany*, translated by Mr. A. W. Bennett and Mr. W. T. Dyer (Macmillan & Co.) is a valuable work of reference in regard to Structural and Physiological Botany. Bentley and Trimen's admirable plates of *Medicinal Plants* (J. & A. Churchill) should be consulted by the student both of Botany and Materia Medica.

MATERIA MEDICA AND THERAPEUTICS.

A WELL-KNOWN and useful book as a manual of Materia Medica is Dr. Garrod's *Essentials of Materia Medica and Therapeutics*, edited by Dr. Buchanan Baxter (ninth edition, Longmans & Co.). It requires, however, to be supplemented by a treatise on Therapeutics, for which purpose Dr. Ringer's *Handbook of Therapeutics* (tenth edition, H. K. Lewis), Dr. Waring's *Manual of Practical Therapeutics* (third edition, J. & A. Churchill), Dr. Farquharson's *Guide to Therapeutics* (third edition, Smith, Elder, & Co.). Dr. Milner Fothergill's *Practitioner's Handbook of Treatment* (second edition, Macmillan & Co.) will be of value to those who are interested in the endeavour to show the agreement between science and practice. Dr. H. C. Wood's *Treatise on Therapeutics* (Smith, Elder, & Co.) pays special attention to the therapeutic action of drugs. Other useful books are Dr. Lauder Brunton's *Text-book of Pharmacology, Therapeutics, and Materia Medica* (Macmillan & Co.), Dr. W. G. Smith's *Commentary on the British Pharmacopœia* (Smith, Elder, & Co.), Royle and Harley's *Manual of Materia Medica and Therapeutics*, sixth edition (J. & A. Churchill), Neligan's *Medicines*, edited by Mr. Macnamara (Fannin & Co.). Dr. Phillips's *Materia Medica and Therapeutics* (J. & A. Churchill), Dr. Whitla's *Materia Medica, Therapeutics, and Practical Pharmacy*, new edition (Renshaw), Dr. Mitchell Bruce's *Manual of Materia Medica and Therapeutics* (Cassell & Co), Dr. Scoresby-Jackson's *Note-book of Materia Medica*, edited by Dr. Moinet (fourth edition, Machlachlan & Stewart; and Simpkin, Marshall, & Co.); Dr. Handsel Griffith's *Materia Medica and Pharmacy*, edited by Dr. Duffey (Baillière, Tindall, & Cox: and Fannin & Co., Dublin), Dr. R. Bartholow's *Practical Treatise on Materia Medica and Therapeutics* (fifth edition, H. K. Lewis), Thorowgood's *Student's Guide to Materia Medica* (second edition, J. & A. Churchill), Craig's *Manual of Materia Medica and Therapeutics* (fourth edition, Livingstone, Edinburgh; and Simpkin, Marshall, & Co.). Dr. F. T. Roberts' *Notes on Materia Medica and Pharmacy* (H. K. Lewis), and Dr. Isambard Owen's manual of *Materia Medica* (J. & A. Churchill), Dr. Lauder Brunton's *Tables of Materia Medica* (new edition, Smith, Elder, & Co.), form a most comprehensive and valuable syllabus, and will be very useful to the student. Dr. W. H. Griffith's *Lessons on Prescriptions, and the Art of Prescribing* (Macmillan & Co.) is an useful work.

As text-books in the application of Electricity to Medicine, besides Dr. Althaus's *Treatise on Medicinal Electricity* (Longmans & Co.), the following are likely to prove useful to students:—a *Text-book of Electricity in Medicine and Surgery*, by Dr. G. V. Poore (Smith, Elder, & Co.); a *Handbook of Medical and Surgical Electricity*, and *How to Use a Galvanic Battery*, by Dr. H. Tibbits (second edition, J. & A. Churchill); Dr. A. de Watteville's *Practical Introduction to Medical Electricity* (second edition, H. K. Lewis); Dr. Roberts Bartholow's *Medical Electricity* (Kimpton); and Dr. Hughes Bennett's *Electro-Diagnosis in Diseases of the Nervous System* (Lewis).

PATHOLOGY.

AS a manual of Pathology, Dr. T. H. Green's *Introduction to Pathology and Morbid Anatomy* (sixth edition, Renshaw) has gained a deservedly high reputation. The *Lectures on Pathological Anatomy* of Drs. Wilks and Moxon (second edition, J. & A. Churchill), and Dr. J. F. Payne's improved edition of Jones and Sieveking's *Manual of Pathological Anatomy* (J. & A. Churchill), Dr. G. S. Woodhead's *Practical Pathology* (second edition, Y. J. Pentland), and Dr. J. Coats' *Manual of Pathology* (Longmans, Green, & Co.), are also good books. A second edition of an English translation of Virchow on *Post Mortem Examinations: the Method of Performing them*, is published by J. & A. Churchill. Messrs. Smith, Elder, & Co. have published a *Manual of Necropsy*, by Dr. A. H. Newth, which is intended as a guide to the performance of *post mortem* examination. There are also a *Manual of Surgical Pathology*, by Mr. A. J. Pepper (Cassell & Co.), and a work on *Pathological Anatomy*, by Ziegler. We would also strongly recommend students to consult, and to possess, if possible, Rindfleisch's *Manual of Pathological Histology*, edited by the New Sydenham Society. Other highly valuable works for reference are Dr. Greenfield's translation of Lancereaux's *Atlas of Pathological Anatomy* (J. & A. Churchill), and an English translation by Mrs. Ernest Hart of a *Manual of Pathological Anatomy*, by Cornil and Ranvier (Smith, Elder, & Co.).

MEDICINE.

For the student who is commencing his clinical studies there are several very good guide-books. Among them are Dr. A. W. Barclay's *Manual of Medical Diagnosis* (third edition, J. & A. Churchill); Dr. S. Fenwick's *Student's Guide to Medical Diagnosis* (fifth edition, J. & A. Churchill); Dr. Graham Brown's *Manual of Medical Diagnosis* (Bell & Bradfute, and Simpkin, Marshall, & Co.); Dr. O. Sturges' *Introduction to the Study of Clinical Medicine* (Smith, Elder, & Co.); Dr. Finlayson's *Clinical Manual for the Study of Medical Cases* (Smith, Elder, & Co.); and Dr. Warner's *Student's Guide to Medical Case-taking*, second edition (J. & A. Churchill). More advanced students and practitioners may consult with advantage Dr. Da Costa's *Medical Diagnosis* (third edition, Smith, Elder, & Co.). As a guide in physical diagnosis, Dr. Gee's *Auscultation and Percussion* (third edition, Smith, Elder, & Co.) may be safely trusted: also Dr. S. West's *How to Examine the Chest.* Other useful books for the same purpose are Dr. Flint's *Manual of Percussion and Auscultation* (J. & A. Churchill); and Dr. Reginald Thompson's *Physical Examination of the Chest in Health and Disease* (H. Renshawe).

Among text-books in General Medicine, which may be recommended for the use of the student, are Dr. F. T. Roberts' *Handbook of the Theory and Practice of Medicine* (sixth edition, H. K. Lewis); Dr. Bristowe's *Theory and Practice of Medicine* (fifth edition, Smith, Elder, & Co.); Dr. Tanner's *Practice of Medicine* (edited by Dr. Broadbent); Dr. Aitken's *Science and Practice of Medicine* (seventh edition, C. Griffin & Co.). Dr. H. Hartshorne's *Essentials of the Principles and Practice of Medicine* (fifth edition, Smith, Elder, & Co.); Dr. Flint's *Clinical Medicine* (J. & A. Churchill); Dr. Aitken's *Outlines of the Science and Practice of Medicine* (second edition, C. Griffin & Co.); Dr. Flint's *Principles and Practice of Medicine* (fifth edition, Kimpton); Dr. Roberts Bartholow's *Treatise on the Practice of Medicine* (fifth edition, H. K. Lewis); Dr. Charteris' *Student's Guide to the Practice of Medicine* (third edition, J. & A. Churchill); and Dr. A. Carter's *Elements of Practical Medicine* (third edition, Lewis). A work on the *Principles and Practice of Medicine*, by the late Dr. Hilton Fagge, edited by Dr. Pye-Smith, is announced by Messrs. Churchill. The advanced student and the practitioner will do well to consult Dr. Russell Reynolds' *System of Medicine* (five volumes, Macmillan & Co.); Trousseau's *Lectures on Clinical Medicine* (New Sydenham Society); Ziemssen's *Cyclopædia of the Practice of Medicine* (Sampson Low & Co.); Dr. Niemeyer's *Text-Book of Practical Medicine* (H. K. Lewis); Sir Thomas Watson's *Lectures on the Principles and Practice of Physic* (Longmans & Co.). Dr. Quain's *Dictionary of Medicine* is also a valuable work for reference.

SURGERY.

Mr. Erichsen's *Science and Art of Surgery* (eighth edition, by Mr. M. Beck, Longmans & Co.), Mr. Holmes's *Surgery—its Principles and Practice* (fourth edition, Smith, Elder, & Co) Mr. Bryant's *Practice of Surgery* (fourth edition, J. & A. Churchill), and Mr. Gant's *Science and Practice of Surgery* (second edition, Baillière, Tindall, & Cox), are all very complete works, one of which should be in the possession of the student. For those who prefer smaller and more condensed works, there is the well-known Druitt's *Surgeon's Vade-Mecum* (eleventh edition, J. & A. Churchill). Mr. Christopher Heath has brought out a *Student's Guide to Surgical Diagnosis* (second edition, J. & A. Churchill). There is also a manual of *Surgical Diagnosis*, by Mr. A. P. Gould (Cassell & Co). Other books which may be consulted with advantage are, Mr. Holmes's and Mr. Hulke's *System of Surgery* (third edition, Longmans & Co.), Mr. Spence's *Lectures on Surgery* (A. & C. Black), Dr. S. D. Gross's *System of Surgery* (sixth edition, Smith, Elder, & Co.), and Billroth's *Lectures on Surgical Pathology and Therapeutics* (H. K. Lewis). Mr. Watson Cheyne's *Antiseptic Surgery*, and his *Manual of the Antiseptic Treatment of Wounds* (Smith, Elder, & Co.), are standard works on the subject of which they treat.

For the guidance of the student who is being instructed in practical and operative surgery, there are several good books. Mr. Christopher Heath's *Manual of Minor Surgery and Bandaging* (seventh edition, J. & A. Churchill) has for several years enjoyed a high reputation. The *Manual of Operative Surgery on the Dead Body*, by Mr. Thomas Smith and Mr. Walsham (Longmans & Co.); Mr. Christopher Heath's *Guide to Surgical Diagnosis* (J. & A. Churchill); Mr. Berkeley Hill's *Essentials of Bandaging* (fifth edition, Lewis); Mr. Bellamy's *Student's Guide to Surgical Anatomy* (third edition, J. & A. Churchill); Mr. Joseph Bell's *Manual of the Operations of Surgery* (fourth edition, Maclachlan & Stewart); and Stimson's *Operative Surgery* (Lewis), are also works which can be recommended. The first part of a work on *Surgical Operations*, by Sir W. Mac Cormac (Smith, Elder, & Co.) has lately appeared. A *Manual of Regional Surgery*, by Mr. F. A. Southam (J. & A. Churchill), is in course of publication; and a *Manual of Operative Surgery*, by Dr. Joseph D. Bryant, has also appeared (Bermingham & Co.). Other larger works most valuable for reference are Mr. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, consisting of plates, woodcuts, &c., illustrating surgical diseases, symptoms, accidents, operations, &c., published in fasciculi by J. & A. Churchill); Mr. Hutchinson's *Lectures on Clinical Surgery* (J. & A. Churchill); Mr. C. Heath's *Course of Operative Surgery*, with coloured plates by M. Leveillé (J. & A. Churchill); Mr. Norton's edition of Bernard and Huette's *Text-book of Operative Surgery* (Baillière, Tindall, & Cox); Dr. Steven Smith's *Manual of the Principles and Practice of Operative Surgery* (Sampson Low & Co.); and Dr. J. Ashhurst's *International Encyclopædia of Surgery* (Macmillan & Co.). For the student of Military Surgery, Surgeon-General Longmore's work on *Gunshot Injuries* (Longmans & Co.), and Surgeon-Major Porter's *Surgeon's Pocket Book* (second edition, C. Griffin & Co.), are essential. A translation, by Mr. Clutton, of Professor Esmarch's *Surgeon's Handbook on the Treatment of Wounded in War* (Sampson Low & Co.) is also a valuable work.

MIDWIFERY; AND DISEASES OF WOMEN AND CHILDREN.

The text-books of Obstetric Medicine which hold the first place in the present day are, Dr. W. S. Playfair's *Treatise on the Science and Practice of Midwifery* (fifth edition, Smith, Elder, & Co.); Drs. Robert and Fancourt Barnes's *System of Obstetric Medicine and Surgery* (Smith, Elder, & Co.); Dr. Leishman's *System of Midwifery* (third edition, J. Maclehose, Glasgow; and Macmillan & Co.). Every student should have one or the other of these. There are also Dr. W. T. Lusk's *Science and Art of Midwifery* (second edition, H. K. Lewis); and Cazeaux and Tarnier's *Obstetrics; the Theory and Practice*, translated by Dr. R. J. Hess (H. K. Lewis). For those who prefer smaller books, Dr. D. Lloyd Roberts's *Guide to the Practice of Midwifery* (third edition, J. & A. Churchill) will be useful; there are also Dr. Alfred Meadows's *Manual of Midwifery* (fourth edition, Renshaw); Milne's *Manual of Midwifery* (second edition, Livingstone, and Simpkin, Marshall, & Co.); and Dr. C. H. Carter's translation of Schröder's *Manual of Midwifery* (J. & A. Churchill). As works of illustrations, Dr. Martin's *Atlas of Obstetrics and Gynæcology*, edited by Dr. Fancourt Barnes (H. K. Lewis), Dr. H. Savage's *Female Pelvic Organs* (fifth edition, J. & A. Churchill), and Dr. Berry Hart's *Atlas of Female Pelvic Anatomy* (W. & A. K. Johnston), are to be recommended. Dr. J. G. Swayne's *Obstetric Aphorisms* (eighth edition, J. & A. Churchill) are very useful. Dr. Robert Barnes has issued a *Synoptical Guide to the Study of Obstetrics* (Smith, Elder, & Co.), which will be found valuable as an aid to study. Dr. Barnes's *Lectures on Obstetric Operations* (third edition, J. & A. Churchill) should be in the possession of every advanced student and general practitioner; as should also the *Clinical History of the Medical and Surgical Diseases of Women*, by the same author (second edition, J. & A. Churchill). Dr. West's *Lectures on the Diseases of Women* (fourth edition, with additions by Dr. Matthews Duncan, J. & A. Churchill); Dr. Graily Hewitt's *Diagnosis and Treatment of Diseases of Women* (fourth edition, Longmans & Co.); Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women* (second edition, J. & A. Churchill); the late Dr. F. Churchill's work on the *Diseases of Women* (sixth edition, Fannin & Co.); Dr. Edis's *Diseases of Women* (second edition, Smith, Elder, & Co.); the late Dr. J. Thorburn's *Practical Treatise on the Diseases of Women* (C. Griffin & Co.); Mr. Lawson Tait's *Diseases of Women* (Williams & Norgate); Dr. Emmet's *Principles and Practice of Gynæcology* (third edition, J. & A. Churchill); Dr. Gaillard Thomas's *Practical Treatise on the Diseases of Women* (fifth edition, Kimpton); Dr. Heywood Smith's *Practical Gynæcology* (J. & A. Churchill); Sir T. Spencer Wells's treatise on *Ovarian and Uterine Tumours* (J. & A. Churchill); Dr. Fordyce Barker's *Clinical Lectures on Puerperal Diseases* (J. & A. Churchill); Dr. Tilt's *Handbook of Uterine Therapeutics* (fourth edition, J. & A. Churchill); Dr. Macnaughton Jones's *Manual of Diseases of Women and Uterine Therapeutics* (Baillière, Tindall, & Cox); and Mr. Lawson Tait's *Diseases of the Ovaries*, are all valuable books. Other books which will be found useful are Dr. Galabin's *Student's Guide to Diseases of Women* (third edition, J. & A. Churchill); Hart & Barbour's *Manual of Gynæcology* (second edition, Johnston); Dr. Halliday Croom's *Minor Gynæcological Operations and Appliances* (second edition, Livingstone, Edinburgh; Simpkin, Marshall, & Co.); Dr. Courty's work on the *Diseases of the Uterus, Ovaries, and Fallopian Tubes*, translated by Dr. Agnes Maclaren (J. & A. Churchill); and Mr. Alban Doran's *Clinical and Pathological Observations on Tumours of the Ovary, Fallopian Tube, and Broad Ligament* (Smith, Elder, & Co.).

Among text-books on Diseases of Children, must be mentioned Dr. West's well-known *Lectures on the Diseases of Infancy and Childhood* (sixth edition, Longmans & Co.); Dr. Fleetwood Churchill's treatise on *The Diseases of Children* (third edition, Fannin & Co.); Dr. W. H. Day's *Manual on the Diseases of Children* (second edition, J. & A. Churchill); M. Guersant's *Surgical Diseases of Infants and Children*, translated by Dr. Dunglison (Smith, Elder, & Co.); Meigs and Pepper's *Practical Treatise on the Diseases of Children* (seventh edition, H. K. Lewis); Dr. Eustace Smith's *Practical Treatise on Diseases in Children* (J. & A. Churchill); Dr. J. L. Smith's *Treatise on the Diseases of Infancy and Childhood* (fifth edition, H. K. Lewis); Dr. Tanner and Dr. Meadows' *Practical Treatise on Diseases of Infancy and Childhood* (third edition, H. Renshaw); and Steiner's *Compendium of the Diseases of Children*, translated by Mr. Lawson Tait (J. & A. Churchill).

SPECIAL SUBJECTS.

There are several good text-books of the special departments which are taught in the schools.

For students of Psychological Medicine, the chief work is Bucknill and Tuke's *Manual of Psychological Medicine* (fourth edition, J. & A. Churchill). There are also Dr. Clouston's *Clinical Lectures on Mental Diseases* (J. & A. Churchill); Dr. E. C. Mann's *Manual of Psychological Medicine and Allied Nervous Diseases* (J. & A. Churchill); Dr. W. H. O. Sankey's *Lectures on Mental Diseases* (second edition, H. K. Lewis); Dr. Blandford's *Lectures on Insanity and its Treatment* (third edition, Oliver & Boyd, and Simpkin, Marshall & Co.); Dr. G. H. Savage's *Manual of Insanity and Allied Neuroses* (Cassell & Co.); and Dr. W. A. Hammond's *Treatise on Insanity* (H. K. Lewis).

For students of Ophthalmic Surgery, Mr. R. B. Carter's *Treatise on Diseases of the Eye* (Macmillan & Co.); Mr. Nettleship's *Student's Guide to Diseases of the Eye* (third edition, J. & A. Churchill); Mr. Macnamara's *Manual of Diseases of the Eye* (fourth edition, J. & A. Churchill); Mr. Wharton Jones's *Manual of Ophthalmic Medicine and Surgery* (third edition, J. & A. Churchill); Mr. George Lawson's *Diseases and Injuries of the Eye* (fifth edition, Renshaw); Dr. H. W. Williams's *Diagnosis and Treatment and Diseases of the Eye* (Sampson Low & Co.); Mr. B. T. Lowne's *Handbook of Ophthalmic Surgery* (Smith, Elder, & Co.); Mr. Juler's *Handbook of Ophthalmic Science and Practice* (Smith, Elder, & Co.); Mr. Hartridge's *Refraction of the Eye* (J. & A. Churchill); and Mr. Swanzy's *Handbook of Diseases of the Eye and their Treatment* (H. K. Lewis), are books that will be useful. Dr. de Wecker's *Ocular Therapeutics*, translated by Dr. Litton Forbes (Smith, Elder, & Co.), and Dr. Wolfe's work on *Diseases and Injuries of the Eye* (J. & A. Churchill), may be consulted with advantage. A second edition of a book by Mr. E. A. Browne, for instructing students *How to Use the Ophthalmoscope*, is published by Trübner & Co. A *Manual and Atlas of Medical Ophthalmoscopy*, by Dr. Gowers (second edition, J. & A. Churchill), is a valuable work; Liebreich's *Atlas of Ophthalmoscopy*, edited by Mr. Swanzy (third edition), is also very useful.

In Aural Surgery, Mr. Dalby's book on *Diseases and Injuries of the Ear* (second edition, J. & A. Churchill) is very good; there are also a book by Mr. G. P. Field on *Diseases of the Ear* (third edition, Renshaw); a *Manual of Diseases of the Ear*, by Dr. T. Barr (Maclehose, Glasgow; and Macmillan, London), and a *Guide to the Study of Ear-Disease*, by Dr. P. McBride (W. & A. K. Johnston); while Dr. Burnett's work on *The Ear: its Anatomy, Physiology, and Diseases* (second edition, J. & A. Churchill), and Dr. St. John Roosa's *Practical Treatise on Diseases of the Ear* (sixth edition, H. K. Lewis) are valuable and elaborate works. Dr. Macnaughton Jones has brought out a good *Practical Treatise on Aural Surgery* (second edition, J. & A. Churchill), and also a well-executed *Atlas of the Diseases of the Membrana Tympani and Auricle* (J. & A. Churchill).

For the use of students in Dermatology, Mr. Malcolm Morris's *Manual of Skin-Diseases* (Smith, Elder, & Co.), and Dr. L. D. Bulkley's *Manual of Diseases of the Skin* (J. & A. Churchill), are very reliable guides. Sir Erasmus Wilson's *Treatise on Diseases of the Skin*, and his *Lectures on Dermatology* (J. & A. Churchill) are well-known and valuable works. Dr. R. Liveing's *Handbook on the Diseases of the Skin* (third edition, Longmans & Co.) is well deserving of recommendation; so also is Dr. McCall Anderson's *Treatment of Diseases of the Skin* (Macmillan & Co.). For reference, there are Fox's *Photographic (Coloured) Illustrations of Skin-Diseases and of Cutaneous Syphilis* (J. & A. Churchill), and an *Atlas of Skin-Diseases* by Dr. Duhring, of Philadelphia (Lippincott & Co.).

For students of Dental Surgery, the following books published by Messrs. J. & A. Churchill: Tomes's *Manual of Dental Surgery* (second edition); Tomes's *Manual of Dental Anatomy* (second edition); Taft's *Practical Treatise on Operative Dentistry* (third edition); Sewill's *Student's Guide to Dental Anatomy and Surgery* (second edition, Churchill); Stocken's *Elements of Dental Materia Medica and Therapeutics* (third edition); and Coles's *Manual of Dental Mechanics* (second edition). There are also a *Manual of Dental Surgery and Pathology*, by Mr. A. Coleman (Smith, Elder, & Co.), and Barrett's *Dental Surgery for General Practitioners and Students of Medicine* (H. K. Lewis). Among larger works are Gorgas's *Dental Medicine* (J. & A. Churchill), and Harris's *Principles and Practice of Dentistry* (eleventh edition, J. & A. Churchill).

FORENSIC MEDICINE AND HYGIENE.

As elementary works of convenient size, and containing valuable instruction, Dr. A. S. Taylor's *Manual of Medical Jurisprudence* (tenth edition, J. & A. Churchill), Husband's *Forensic Medicine and Medical Police* (Livingstone), and Guy and Ferrier's *Principles of Forensic Medicine* (Renshaw) are to be recommended. The more advanced student and the practitioner should consult Dr. Taylor's *Principles and Practice of Medical Jurisprudence* (third edition, by Dr. Stevenson, J. & A. Churchill); the *Handbook of Forensic Medicine and Toxicology*, by the late Dr. Bathurst Woodman and Dr. Tidy (J. & A. Churchill); Dr. Ogston's *Lectures on Medical Jurisprudence* (J. & A. Churchill); and the translation of Casper's *Forensic Medicine*, published by the New Sydenham Society. The last-named book describes the manner in which medico-legal investigations are carried out on the Continent. Dr. C. M. Tidy's work on *Legal Medicine* (Smith, Elder, & Co.) is a valuable book.

Under the head of Hygiene the principal books are, Dr. Parkes's *Manual of Practical Hygiene*, edited by Prof. de Chaumont (sixth edition, J. & A. Churchill); Wilson's *Handbook of Hygiene and Sanitary Science* (fifth edition, J. & A. Churchill); Dr. A. H. Buck's *Treatise on Hygiene and Public Health* (Sampson Low & Co.); Prof. de Chaumont's *Lectures on State Medicine* (Smith, Elder, & Co.); Hart's *Manual of Public Health* (Smith, Elder, & Co.); and Hart's *Truth about Vaccination* (Smith, Elder, & Co.). Several excellent essays on hygienic subjects, by Sir H. W. Acland, Dr. Corfield, Mr. Pridgin Teale, Captain Douglas Galton, Dr. G. V. Poore, Mr. Eassie, and other well-known authorities, have been published in connection with the International Health Exhibition.

REVIEWS.

Article 4628.

Lectures on the Diagnosis of Diseases of the Brain. Delivered at University College Hospital by W. R. Gowers, M.D., F.R.C.P., Assistant Professor of Clinical Medicine in University College, &c. Pp. 246. London: J. & A. Churchill. 1885.

This book is to be considered as a companion volume to the author's work on the diagnosis of diseases of the spinal cord, and has, as Dr. Gowers tells us in the preface, been published at the request of many readers of the latter well-known treatise. The present work consists essentially of four parts; namely, 1, the medical anatomy of the brain; 2, the symptoms of brain-disease; 3, the diagnosis of the seat of the disease, or localisation; and, 4, the diagnosis of the nature of the lesion, or pathological diagnosis. It is, like everything that proceeds from Dr. Gowers' pen, written in a terse and concise style, and contains throughout clear and precise statements. Those who have thoroughly mastered the contents of this book can have little difficulty in arriving at an accurate diagnosis, in the large majority of cases of cerebral disease which may happen to come under their notice in practice.

We are naturally led to compare Dr. Gowers' book with the corresponding works on the same subject which have already appeared in France and Germany; namely, Charcot's *Leçons sur la Localisation dans les Maladies du Cerveau et de la Moëlle Epinière* (Paris, 1876–80), and Nothnagel's *Topische Diagnostik der Gehirnkrankheiten* (Berlin, 1879). As far as graces of style are concerned, the palm must be unhesitatingly given to the great French pathologist, whose book contains, in singularly simple and beautiful language, the ripe results of steady original work, both at the bedside and in the dead-house, carried on for a lifetime by one of the acutest thinkers and most unprejudiced and wary observers of the present generation. Nothnagel's work, on the other hand, while written in a homely yet perfectly intelligible style, stands unrivalled by the wealth of clinical material which it contains, and which the author has drawn, not only from his own practice, but from that of the best observers of the present generation. Every statement that is made by Nothnagel is illustrated by one or more cases which have been carefully selected for his particular purpose, and the reader has therefore the advantage of being enabled to check the writer's conclusions from the very material furnished by him. If we could find a fault with Dr. Gowers' book, the general excellence of which we are glad to admit, it is that his style, like Macaulay's, is so terse and epigrammatic that it is apt to become somewhat fatiguing as we go on; and that his statements, always made with the greatest precision, are in general unsupported by clinical evidence. The reader is therefore confronted with the αὐτὸς ἔφα, and has to receive the author's opinions unchecked as they stand. Some of these differ in important particulars from those which are now more or less generally accepted; and we think that in such points Dr. Gowers should have given us more than simple assertions. To mention only one instance, he says that a lesion, even an extensive lesion, may exist in either the 'caudate or lenticular nucleus, and so long as it does not interfere with the functions of the internal capsule, it causes no symptoms.' Charcot, on the contrary, states (*l. c.* p. 98) that lesions limited to these grey nuclei cause the ordinary symptoms of cerebral hemiplegia, which is, however, commonly transitory, and not permanent, like that caused by destruction of the internal capsule. He explains the benign character of this form of paralysis by the circumstance that these nuclei are hardly ever affected in their totality, owing to the peculiar distribution of their blood-vessels, and that there may be functional substitution established, either between the different parts of the nucleus caudatus, or between the nucleus caudatus and the diverse segments of the lenticular nucleus. Again, Nothnagel (*l. c.* p. 267) gives us a whole series of cases: 1, of disease of the lenticular nucleus; 2, of the nucleus caudatus; 3, of the anterior portion of the internal capsule; 4, of either of the grey nuclei and the anterior limb of the internal capsule; 5, of the posterior limb of the internal capsule; and finally, 6, of the lenticular nucleus and the posterior limb of the internal capsule. He then arrives, from a most careful analysis of all these different cases, at the result that acute destruction of the lenticular nucleus causes motor paralysis, while chronic disease, and more especially slowly growing tumours, may exist without hemiplegia. He also shows that, in acute disease of the nucleus, the paralysis is certainly not owing to participation of the internal capsule. Whoever will peruse Nothnagel's most elaborate and careful statement of the whole case, will certainly be unable to accept Dr. Gowers' short denial that hemiplegia is ever caused by disease of the grey nuclei alone.

The term 'paresis,' which is commonly used by the most prominent neurologists, both English and continental, for incomplete paralysis, does not find favour in Dr. Gowers' eyes. He says of it that it has lately 'become fashionable to call the partial loss "paresis," a term of doubtful value except as a means of giving a questionable satisfaction to patients, who find comfort in the mysterious word, and think well of its donor.' It must be remembered, however, that the term in question is habitually used by such men as Charcot and Westphal; nor can the usefulness of the term be denied, seeing that it is much shorter than that of 'incomplete paralysis.'

Dr. Gowers' remarks on the 'all-important distinction between the so-called functional and organic diseases of the brain' are excessively short, and should be considerably enlarged in a subsequent edition. This distinction is one in which considerable mistakes are frequently made in practice to the detriment of the patient, and has, as far as we are aware, not yet been treated in a sufficiently exhaustive manner by any of the numerous authors who have written on cerebral disease.

Julius Althaus.

Article 4629.

A Guide to the Examination of the Urine. By J. Wickham Legg, F.R.C.P. Sixth Edition. London: H. K. Lewis. 1885.

The fact that this little manual has reached its sixth edition, would seem to indicate that it has been appreciated highly by the clinical clerks and students for whom it is designed.

The present edition touches upon the recent work which has been done in connection with the chemical examination of morbid urine; but perhaps this part of the work is a little disappointing. Indeed, the chemical portion of the treatise is altogether less satisfactory than the microscopical and histological portions, which are, no doubt, excellent. It is not that the methods recommended are not the best, or that the chemical facts are, as a rule, inaccurate, but that the special difficulties met with in applying these processes to urine are not always sufficiently dwelt upon; whilst the whole of the appendix for the quantitative determinations of urinary ingredients is based upon an erroneous hypothesis. The author states in the first paragraph of the appendix that 'no account of the method of making standard solutions is given, as this preparation requires a greater knowledge of chemistry than is usually possessed by the clinical student.' Now this is an undoubted fact; but, such being the case, it is not conceivable that results of any value either to himself or to anyone else will be produced by a clinical clerk, who cannot make up his own standard solutions, and therefore the utility of the subsequent directions appears doubtful.

One or two inaccuracies must be noticed.

On p. 32, the picric acid test for sugar is described and commented on in about ten lines; but the directions given are not those of Dr. George Johnson, though his name is quoted as recommending the test, and the colour produced when sugar is present is not a 'claret red' as stated; if it were so, it might, indeed, be difficult for the student to distinguish the tint given by a healthy from that yielded by a diabetic urine; but, as a matter of fact, it is not so.

On p. 53, the *hourly* excretion of urine by a healthy man is said to vary from 20 to 2,000 cubic centimètres. This is clearly a misprint for 20 to 200 cubic centimètres, which are the figures in Markham's translation of Neubauer and Vogel on the Urine, fourth edition, p. 355, from which the passage appears to be quoted.

On p. 109 we find the words, 'It is necessary to have the urine *moderately* transparent to obtain results which are *tolerably* accurate' by means of the polariscope. We have italicised the adverbs, because the liquid must be *perfectly* transparent in order to ensure accuracy in polariscopic observations.

The greater portion of the work is excellent, but, as six editions have appeared, we may hope for a seventh; and the above remarks are rather suggestions for further improvements in future, than condemnations of the past.

Article 4630.

Cocaine and its Use in Ophthalmic and General Surgery. By H. Knapp, M.D., Professor of Ophthalmology in the Medical Department of the University of New York. G. P. Putnam's Sons: New York and London. 1885.

We have here a valuable collection of facts and observations regarding the physiological action and therapeutic uses of cocaine. Dr. Knapp begins by giving a translation of Dr. Koller's paper, read before the Medical Society of Vienna in October last; and we would recommend a careful perusal of it, in as far as it contains nearly all the facts of importance we yet possess on the subject. A paper read by Dr. Koller at the Ophthalmological meeting at Heidelberg, in September 1884, first aroused general attention to the local anæsthetic action of cocaine, and American surgeons were not slow to recognise its advantages. Dr. Knapp is scarcely justified, however, in remarking that 'it is characteristic of conservative England, that medical men were waked up to the remarkable advantages of a new remedy fully six weeks later than their American brethren, whereas, with an equal spirit of receptiveness and progressiveness they ought to have been two weeks before them.' Perhaps English surgeons were culpably slow in publishing their observations, but it cannot be said that they lost much time in trying the drug.* But, we may ask, how did Americans hear of cocaine so soon? Does Dr. Knapp recognise the same characteristic conservative spirit in the enterprise which has brought America within such easy hail of Europe? With this good-humoured protest, we would acknowledge a grain of truth in his accusation.

Dr. Knapp has subjected himself to various experiments in investigating the action of cocaine, and his results are most instructive. Among other facts, he found that a local application destroys temporarily the senses of taste and of smell. Its action in these respects may yet be utilised. Our author quotes numerous American contributions on the uses of the drug, most of which correspond with our experience in this country. Two methods of employing it in enucleation of the eyeball are described. Of the European contributions mentioned, that by Dr. E. Meyer is the most important. In a paper published in October last, this gentleman explained the diminished tension of the eyeball and the dilatation of the pupil by a diminution of blood in the ocular vessels, and mentioned the fact (observed by Weber) that cocaine will enlarge a pupil already dilated by atropine. Dr. Knapp concludes the first part of his book, by giving an excellent short account of the pharmacology and the physiological and therapeutic action of cocaine.

We next have special accounts of its uses in ophthalmology, otology, the surgery of the upper air-passages, general surgery, genito-urinary, and minor surgery, and gynæcology and obstetrics, written by our author, and by Drs. Bosworth, Hall, Keyes, and Polk. Dr. Bosworth found that an application of cocaine solution to the nasal mucous membrane cut short an acute coryza, and gave complete relief in mild cases of hay-fever. Inhalation of fine cocaine spray proved serviceable in bronchitis, arresting the cough temporarily and allowing rest. Thus the physician may come to employ the drug with as much advantage as the surgeon, and we have no doubt it will receive a fair trial at his hands. Dr. Hall has injected a cocaine solution in the neighbourhood of large nerve-trunks, with the result of producing complete insensibility of the parts supplied by them. Occasionally disagreeable symptoms—dizziness, pallor, and nausea—followed this treatment, but he found these relieved by inhalation of nitrite of amyl.

The profession is undoubtedly much indebted to Dr. Knapp for the mass of information regarding cocaine here collected, and not less for his own important contribution to our knowledge of its usefulness. R. Marcus Gunn.

Article 4631.

Gout, and its Relations to Diseases of the Liver and Kidneys. By Robson Roose, M.D., &c. London: H. K. Lewis. 1885.

The author first discusses the pathology and morbid anatomy of gout so far as they have been ascertained, and then passes in review the various theories which have been built up on the facts. He argues against recent views as to the neurotic origin of gout, and strongly adopts the humoral theory. He considers that the primary fact in gout is a functional disorder of the liver, involving an imperfect transformation of albuminous substances to which may often be added an excessive supply of these substances. If the kidneys succeed in eliminating the whole of the excessive quantity of urates formed, the only symptoms manifested are those of the uric acid diathesis; but if these organs be inadequate to the extra work, or if they become irritated by the excess, then the accumulation of urates in the blood leads to the development of gout in some form. He holds that under similar conditions of imperfect digestion and transformation of albuminous substances, albumen may appear temporarily in the urine before the kidneys have suffered structurally. Some practical remarks on treatment conclude the essay, which is marked by careful study and sound judgment, rather than by novelty of thought or brilliancy of illustration. Dawson Williams, M.D.

Article 4632.

School Hygiene and Diseases incidental to School Life. By Robert Farquharson, M.P., M.D., Edin., &c. London: Smith, Elder, & Co. 1885.

Dr. Farquharson's essay is addressed directly to medical officers of schools, and contains a full and lucid discussion of their special difficulties and duties. The chapters on school buildings, school diet, and school diseases will well repay careful study, as they contain the fruits of much ripe experience clearly set forth. There is an entire absence of pedantry, and a strong vein of common sense and practical worldly wisdom, throughout the entire book; these qualities are especially conspicuous in the treatment of such subjects as over-pressure, games, gymnastics, and the recognition and management of epidemic diseases. Dr. Broadbent has contributed some remarks on the symptoms and effects of overstrain of the heart, Mr. Edmund Owen on spinal curvature, and Mr. Brudenell Carter on eyesight in schools. In speaking of the early stages of the acute specific fevers, Dr. Farquharson drops some useful hints. He observes that the appearance of a crop of vesicles in the scalp is pathognomonic of varicella, that the eruption of variola generally first appears on the left side of the forehead at its junction with the hairy scalp, that the characteristic swelling of mumps begins in front of the ear, and that the condition of the throat in scarlatina, the palate studded with granulous prominences, and the tonsils enlarged and 'dabbed over with whitish flakes of lymph,' leave no doubt as to the character of the disease. Though the book is addressed to a technical audience, the greater part of it may be read and understood without difficulty by schoolmasters and parents.

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* The reviewer himself can testify that he ordered some on the first day he heard of it, on Oct. 1, and used it on the very earliest opportunity, considerably before it seems to have been employed in America.

Dawson Williams, M.D.

Article 4633.

Index Bibliographique de la Presse et de la Librairie Médicales. Par le Dr. Cte. Meyners d'Estray, Directeur de la Revue Bibliographique Universelle des Sciences Médicales. Tome Premier. Travaux de 1883. Paris: Administration et Rédaction, 6 Place Saint-Michel.

This elaborate index reflects immense credit upon the industry and research of Dr. d'Estray, being a contribution to medical literature after the style of Dr. Billings's giant work. It will be of great value to those who wish to know what our French brethren especially have written upon various subjects.

Richard Neale, M.D.

NEW INVENTIONS.

Article 4634.

NEW FORCEPS FOR RESECTION.

M. Callin, of Paris, has invented two new forceps to be used in resections, which will render the operation shorter. One pair is used for cutting; the blades, when shut, resemble a parrot's beak, and act like those of English forceps. The second pair is for dilating the ribs.

Article 4635.

NEW GALVANO-CAUSTIC BATTERY.

MM. Viel and Larochelle have invented a new battery for galvano-caustic purposes. It is remarkable for the length of time it remains in working order.

Veterinary Surgery.—Mr. Snarry, a veterinary surgeon, has accomplished a novel feat in the way of surgery. A cow on the Westow Grange Farm, near York, broke its leg, and there being no chance of reducing the fracture, the limb was amputated, and Mr. Snarry tried the experiment of affixing a wooden leg. This has been found to answer admirably, and the cow may be seen grazing, with a calf by its side.

MISCELLANY.

The distinguished German surgeon Volkmann, of Halle, has been created a noble by the King of Prussia.

M. Méhu, in a memoir presented to the Académie de Médecine, states that solutions of biniodide of mercury are best prepared in oils, lard, or vaseline.

M. Dujardin-Beaumetz, in a communication to the Académie de Médecine, states that it is an error to suppose that India-rubber cloths used in dressings are hurtful.

Dr. Paul Börner, of Berlin, editor of the *Deutsche Medicinische Wochenschrift* and the *Reichs-medicinal Kalender*, died on August 30 of peritonitis, at the age of fifty-six.

The Importance of Photography in Medical Jurisprudence.—M. Gosse has, it is said, found means to restore the life-like expression to the eyes of dead bodies. He places a few drops of glycerine and water on the cornea: life-like expression is reproduced.

Prophylaxis of Hydrophobia.—A French contemporary announces that M. Pasteur has discovered a prophylactic method applicable both to man and to animals. Some time ago M. Pasteur applied it to a young boy who had been bitten on both thighs and on the legs and hands. He is now in perfect health.

M. Duclaux has studied the influence of sunlight on the vitality of micrococci. A few hours' exposure to the sunlight weakened the pathogenic micrococci and finally killed them. The inference is that sunlight is an universal hygienic agent, one that is most active and powerful, common to both private and public sanitation.

M. Yvon proposes to substitute soft soap for lard. The soft soap mixes more thoroughly with mercury, and is soluble in water. Mercurial ointment prepared with soft soap can be kept for an indefinite time, neither does it melt when exposed to heat. It does not irritate the skin, and is easily removed by soap and water.

A New Method of Preparing Hypodermic Injections.—M. Limousin, in order to prevent the substances used for hypodermic injections from becoming deteriorated, encloses them in hermetically sealed glass vesicles. The extremity is broken and the syringe immediately filled, when the injection is made.

In consequence of representations made by M. Gragnon, Prefect of Police, to M. Bouchez, Procureur de la République, the latter has decreed that every corpse removed to the Morgue for purposes of medical jurisprudence shall be accompanied either by the commissaire of police, an inspector, or a detective. If a member of the family of the deceased desire to accompany the body, permission to do so is to be accorded, unless there are valid reasons to the contrary.

M. Charrin, in his thesis on experimental septicæmia, states that a specific microbe is developed in the bodies of animals dead from *charbon bacteridium*; this microbe is present after the first inoculation. Animals subsequently inoculated with it die after exhibiting symptoms of infectious illness. The charbon bacterium disappears. Some animals resist, others contract the disease; dogs, frogs, and fowls resist it; some guinea-pigs resist it, others contract it. It is transmitted from the mother to the fœtus.

M. Landowsky has carefully studied the Brazilian plant called by the natives alveloz, and believed by them to cure cancer. M. Landowsky believes this plant to be an euphorbia which was discovered by Martin and described by Muller under the name of *euphorbia heterodoxa*. A preparation of its juice possesses the combined properties of a caustic and of papaïne. It promptly destroys pathological tissues, layer by layer. At Pernambuco, after it is well painted on the tumour, a tobacco leaf is placed over it. M. Landowsky, after applying it, covers it with a dressing of corrosive sublimate, or vaseline and borax.

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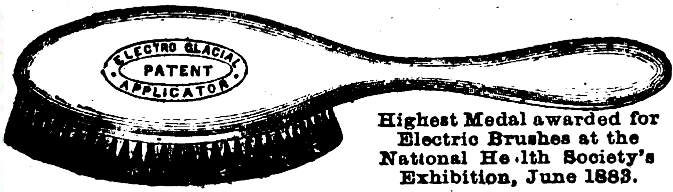

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Medical Record

A MONTHLY REVIEW OF THE

Progress of the Medical Sciences and of
Subjects relating to Public Health

EDITED BY ERNEST HART

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Article 4636.

REPORT OF THE FRENCH COMMISSION ON FERRAN'S ANTICHOLERAIC INOCULATIONS.

At the meeting of the Academy of Medicine in Paris on July 7, M. Brouardel read the report of the Commission presented to the Minister of Commerce.

On the arrival of the Commission (MM. Brouardel, Charrin, and Albarran) in Valencia, Dr. Ferran refused to make known the method he employs to obtain the attenuation of the cholera virus, unless he were remunerated for so doing. He authorised the Commission to examine his inoculating liquid in his laboratory, but would allow none to be taken away. He proposed that the Commission should themselves collect the cholera-dejections and make a pure cultivation, which should be given to him in a flask in a sealed box, the box to remain in his possession for three days; after the expiration of this time the flask to be returned to the Commission, and with the liquid contained in it inoculations to be made in their presence. To these conditions the Commission naturally refused to agree, as no decision could be come to without full knowledge of all the details.

Their official mission thus terminated, but in their private capacity as medical men they determined to visit Dr. Ferran's laboratory and to see as much as he chose to show them. They met there his assistants, whom they describe as M. Pauli, an engineer, M. Pasquel, a lawyer, a professor of accouchements, and a young medical man. The laboratory contained two microscopes with no special illumination, one objective No. 5, which with No. 3 eye-piece gave the highest magnifying power at Ferran's disposal, and a stove formed of a rectangular wooden box, in the centre of which burnt a gas-flame; this stove had no regulator. There were no colouring reagents to be seen, as Dr. Ferran does not use them. A few gas-jets, matrasses, some litres of veal-broth, of which some specimens appeared well sterilised, completed the whole scientific plant. Of the preparations showed them by Dr. Ferran, the first, made with a drop of a cultivation liquid, contained a limited number of spirilla of variable length. In the course and at the extremities of the spirilla were seen a certain number of spherical points, which Ferran said were magnificent examples of endogenous spores. One of the spirilla was uniformly beaded, from the quantity of spores it contained, according to Dr. Ferran. In another preparation there were a certain number of mobile organisms more or less resembling comma-bacilli. The liquid used for inoculation was yellow, thick, and cloudy, like an old cultivation-liquid. A preparation made from it contained numerous round points, some bacilli resembling comma-bacilli, and small straight bacilli. Dr. Ferran considers the round elements found at the extremities and in the course of the bacilli as spheres, because they are seen to enlarge and to finally form mulberry-shaped bodies, from which escape jets of protoplasm constituting the spirilla. When the torsion of the spirilla is not well marked, their segmentation gives rise to straight bacilli. All the preparations were examined with a power of 700 or 800 diameters only; and the illumination was not all that could be desired. No colouring was used.

As he had no more preparations to show, Dr. Ferran was asked to give his ideas of the multiple evolution of the comma-bacilli. He appears to have modified his opinions, and no longer attributes to the oögonium, oösphere, and polinide the part he originally assigned to them. He also, without, however, having seen them, described the state in which the comma-bacilli exist in water and in the soil. He offered to show the mulberry-shaped bodies if the Commission would wait six days. 'As regards the morphology,' say the Commission, 'we have only obtained incomplete premisses. All that we have seen is not new, and all what was new in the description of M. Ferran we have not seen.'

Turning to the experimental side of the question, the Commission were told, as with the morphology, that they only had to reproduce it for themselves. In the laboratory were no animals either experimented on or ready for experiment. Ferran at present is only occupied with the practical side—that is, inoculation. Questioned as to the symptoms presented by animals, he said that after subcutaneous injection of two cubic centimètres guinea-pigs died in a few hours, after fall of temperature and rigors; no diarrhœa or vomiting—symptoms common to many forms of septicæmia, and not at all resembling cholera. In their blood are found many round elements, which he considers as micrococci; no spirilla or comma-bacilli. In the report of the Barcelona Commission mention is made of spirilla and commas as existing in great quantity in the blood. Dr. Ferran in his first communication describes mulberry-shaped bodies also.

On July 1 Dr. Ferran vaccinated, in the presence of the Commission, twenty 'Little Sisters of the Poor.' He carried his vaccine to the hospice in a matrass. This did not appear carefully closed, and the contents several times during the transit strongly impregnated the cotton-wool and the caoutchouc closing the matrass. On arriving at the hospice, Ferran poured his liquid into a cup, not disinfected; then, filling a syringe with one cubic centimètre, he injected it into the posterior external part of the arm, taking no care to expel the air in the syringe first, nor to pass the cannula through the flame to disinfect it. The injection was repeated in the other arm.

The persons inoculated after twenty-four or forty-eight hours presented symptoms of malaise and variations of temperature. They had no vomiting or diarrhœa. In the blood no spirilla or commas were found, and no commas in the dejections. No grave symptoms followed any of these inoculations.

The published statistics seem favourable to the practice of anti-cholera inoculation; but these must be accepted with some reserve for the following reasons. The official estimate of the population in Spain is always less than the actual number. The real number of inhabitants is understated by the town authorities to avoid certain octroi duties, which increase with the population. Thus the official calculation for Alcira is 16,000, the population really being from 20,000 to 23,000. The number of deaths, too, due to cholera is falsified, either to prevent panic, or to avoid the establishment of a sanitary cordon consequent on the town being declared infected. Thus, neither the actual population nor the number of deaths can be exactly known. The statistics of the inoculations are in the hands of Ferran and his partisans only, the Government taking no cognisance of them. With these reservations the Commission give the following figures :—

Alcira : population (official), 16,000 ; probable, 23,000.

Number.	Cases.	Deaths.
Non-inoculated (minimum 5,500, maximum, 12,500)	374	169
Inoculated, 10,500	37	7
Reinoculated-	35	6
Alberique : population (official), 5,000.		
Non-inoculated, 4,000	192	73
Inoculated, 938	10	3
Re-inoculated	3	0
Algemisi : population (official), 7,856 ; probable, 10,500.		
Non-inoculated (official), 6,600 ; probable, 9,300	484	208
Inoculated, 1,202	21	5
Re-inoculated, 623	1	1

These statistics are not very numerous, and it may be asked if those unfavourable to the practice are withheld. Thus the Governor of Valencia told the Commission that in Masaneva 67 per 100 of the inoculated were attacked with cholera. The great number of re-inoculated attacked is remarkable, as, according to Ferran, re-inoculation confers almost absolute immunity.

The Commission conclude that the scientific value of the process used by Ferran to obtain the attenuation of the cholera virus and the complete study of his method are rendered impossible by his refusal. His opinions on the morphology of the bacillus, and on the study of the blood of the vaccinated animals, have undergone many variations. The scientific apparatus of his laboratory is insufficient for the difficult and intricate study of disease-germs. Inoculations in man and in animals give rise to no symptoms resembling cholera. The inoculations, however, appear inoffensive. Vital statistics in Spain possess two faults, which render them valueless—the actual population is unknown and the number of deaths due to cholera is disguised. Re-inoculation certainly does not confer complete immunity. None of the arguments invoked in favour of this doctrine can stand the ordeal of criticism ; the proof of the prophylactic value of the anti-choleraic inoculations practised by Dr. Ferran is then not complete.

G. D'Arcy Adams, M.D.

Article 4637.

SORMANI AND BRUGNATELLI ON THE PROPHYLAXIS AND THERAPEUTICS OF TUBERCLE.*

Tuberculosis of the lungs being due to the presence of the bacillus discovered by Koch, of which fact there can now be no doubt, it is not rash to suppose that a substance may be found which may neutralise the virulence of the bacillus, while it is innocuous to the patient, and which may be introduced into the lung by means of the inspired air. To discover such a body was the object of the authors' experiments. His method of experimentation was this. A definite quantity (1 cubic centimètre) of tubercular sputum, the presence of numerous bacilli being previously determined, was intimately mixed with a certain quantity of the chemical body to be tried. The mixture was then kept in the incubation-stove at a temperature ranging from 35° to 40° C. for one or two hours, and again mixed ; it was then injected into the back or peritoneal cavity of a guinea-pig. If the animal had not already died, it was killed at the end of two or more months and carefully examined. If it had become tubercular, it was evident that the chemical agent had not destroyed the virulence of the bacillus ; if at the end of two or more months it were not tubercular, the bacillus must have lost its virulence, and the chemical agent employed must have been efficacious. Five minutes' boiling entirely destroys the virulence of the bacilli, and renders inoculation with the sputa thus treated innocuous. Experiments were made with thirty-six substances of reputed antiseptic powers. The sputa were always collected the same morning, and the presence of Koch's bacilli proved by microscopic examination. Only sputa containing very numerous bacilli were employed. Guinea-pigs inoculated with tubercular sputum without the addition of any reagent all died of diffused tuberculosis. The following are the conclusions.

1. Some of the reagents tried showed no action on the bacillus. Such were—iodide of silver in the proportion of 10 centigrammes to 1 cubic centimètre of sputum ; iodide of ethylene in the same quantity ; cod-liver oil in equal quantities with the sputa ; strong aqueous solution of bromine (10 drops to 1 cubic centimètre) ; bromide of camphor, powdered alum, sulpho-carbolate of zinc, benzoate of soda, salicylate of soda, and naphthaline, each in quantities of 10 centigrammes to 1 cubic centimètre ; monobromide of naphthaline, 1 cubic centimètre ; borneol, 10 centigrammes to 1 cubic centimètre ; bisulphate of quinine, saturated solution, ½ a cubic centimètre ; absolute alcohol in great quantities with the sputa ; ozone passed as a gas through the sputa for two hours and a half.

2. The following substances gave no results, being either caustic or poisonous. Iodide of methyl, poisonous in the dose of 1½ cubic centimètre to guinea-pigs ; eucalyptol, poisonous in the dose of 1 and even of ½ a cubic centimètre ; chloride of gold, caustic in the dose of 10 centigrammes ; chloride of platinum.

3. The following bodies had an attenuating action only ; perhaps if the quantities used were greater the results would be more decisive. Iodide of propyl, which, in the dose of ½ a cubic centimètre, gave two cases of slight tuberculosis ; iodide of ethyl in the dose of 1½ cubic centimètre, and eucalyptol in the dose of ½ a cubic centimètre, poisonous in larger quantities ; chlorine gas passed for ten minutes through the sputa, and chlorine dissolved in 5 cubic centimètres of water ; salicylate of methyl, 1½ cubic centimètre ; helenin, 20 centigrammes ; iodine gave one positive and one negative result.

4. The following bodies entirely neutralised the virulence of the bacilli. Bromide of ethyl, ½ a cubic centimètre to 1 cubic centimètre of sputum ; chloride of palladium, 10 centigrammes ; bichloride of mercury, 5 milligrammes, even with 5 decimilligrammes its power was evident in attenuating the virus ; carbolic acid, 5 centigrammes ; creasote, ½ a cubic centimètre, and even less ; naphthol (α), 20, 10, or 5 centigrammes ; naphthol (β), 20 centigrammes, but

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* Sormani and Brugnatelli.—Experimental Researches on the Prophylaxis and Therapeutics of Tubercle. (*Annali Univ. di Medicina*, Feb. 1885.)

not in less quantities; saturated alcoholic solution of camphor, 1 cubic centimètre; camphoric acid, a saturated alcoholic solution, 1 centimètre; lactic acid, 1 cubic centimètre; turpentine, 5 drops to 1 cubic centimètre sputum, but not in less quantities.

5. Arranging this last class in the order of their efficacy, from the least to the most active, we have: lactic acid, 1 cubic centimètre; saturated solution of camphoric acid, 1 cubic centimètre; saturated solution of camphor, 1 cubic centimètre; bromide of ethyl, ½ a cubic centimètre; naphthol (β), 20 centigrammes; turpentine, 5 drops; chloride of palladium, 10 centigrammes; creasote, 10 centigrammes, or 2 drops; naphthol (α), 5 centigrammes; carbolic acid, 5 centigrammes; bichloride of mercury, 5 milligrammes. To utilise these substances either for prophylaxis or therapeutically, not only their efficacy in destroying the virulence of the bacilli must be considered, but also their degree of diffusibility, solubility, &c., as well as their irritant, caustic, or poisonous properties must be held in account. G. D'ARCY ADAMS, M.D.

ARTICLE 4638.

SENN ON THE SURGICAL TREATMENT OF CYSTS OF THE PANCREAS.

IN the July number of the *American Journal of the Medical Sciences*, is a paper of much interest by Dr. N. Senn, of Milwaukee, U.S., on the surgical treatment of cysts of the pancreas. The author gives a full report of a case of retention-cyst of the pancreas recently under his own care, which was successfully treated by laparotomy, and summarises in a compact form the clinical history of similar cases, to serve as a basis for some general remarks on the surgical treatment of cysts of the pancreas. The paper presents also some valuable remarks on the pathology, etiology, and diagnosis of these growths.

In the treatment of pancreatic cyst, Dr. Senn points out, the indications are the same as in the treatment of any other kind of cyst, viz., extirpation of the growth, or evacuation of the contents and obliteration of the cyst. Extirpation was performed by Bozeman, with complete success. This plan of operative treatment would guard most effectually against the formation of a permanent pancreatic fistula; but on account of the deep location of the pancreas, shortness or absence of a pedicle, and the many obstacles thrown in the way of the operator by adjacent organs, the procedure becomes one surrounded by innumerable difficulties, and, in the present state of our science, of doubtful propriety. To aspiration of the cyst and simple evacuation of its contents there are two principal objections: escape of the cyst-contents into the peritoneal cavity, and re-accumulation of the secretion. With regard to the first objection, Dr. Senn, in alluding to the experience of Heidenhain, that animals do not suffer in any way from the escape of pancreatic juice into the abdominal cavity, suggests that, although small quantities of pancreatic juice may escape into the peritoneal cavity of an animal without any serious consequences, we have no evidence to show that the peritoneal cavity in man is possessed of the same immunity against such accident; and it would not be prudent to expose a patient to such risk without more light being thrown on this subject by further observation and experiment. Again, pure pancreatic juice is found only in small cysts; in large cysts the fluid has undergone much alteration, and may be mixed with different accidental products, which might produce peritonitis. As, in instances in which a pancreatic fistula has been established, there is usually a long-continued discharge of secretion from the artificial opening, it is very probable that re-accumulation will follow removal of the fluid by aspiration. This plan of treatment, therefore, should be limited to cysts of moderate size, and where adhesions have formed between the cyst and the anterior walls of the abdomen. In cases presenting these favourable conditions, aspiration deserves a trial, and may be repeated as often as required, or until symptoms arise which call for more radical measures.

Dr. Senn holds that the safest, and at the same time the most efficient treatment, consists in establishing a pancreatic fistula, the operation being performed under the same antiseptic precautions as in any other variety of laparotomy. Following a rule laid down by himself that the skin-incision should always be made over the most prominent part of the tumour, Dr. Senn would select the place where adhesions are most likely to be found, and so establish the straightest and most direct route to the primary origin of the cyst. The external incision, it is stated, should be at least four inches in length, while the peritoneum should be opened only to the extent of two inches for the purpose of making an exploratory examination, to be enlarged as occasion may require. If adhesions be found between the cyst and the omentum, and the omentum and parietal peritoneum, the cyst, after a pulmonary puncture to confirm the diagnosis, is incised and drained. If no adhesions be found after incision of the omentum and exposure of the cyst, the parietal peritoneum is stitched to the skin, the margins of the omental wound are pushed back under the abdominal walls, so as to expose the growth freely, and the wound is packed from the bottom with iodoform gauze, and covered by an antiseptic dressing, which is retained for six or eight days, or until adhesions have formed between the cyst and the margins of the wound, and then the growth can be incised and drained. On account of its thinness, the cyst-wall should never be sewn to the margins of the external wound as a preliminary operation. With proper care, however, the operation, Dr. Senn asserts, can be completed at once. The cyst-wall having been brought forward by forceps into close contact with the margins of the wound, is first aspirated, and, as it empties, is pulled through the wound. When it is nearly empty, it is freely incised and sutured to the peritoneal lining of the abdominal wound. A drainage-tube is then inserted, the cyst is emptied completely by compression, and a large Listerian dressing is applied for the purpose of guarding against infection and to absorb the secretion. It is advisable to apply carbolised oil freely to the skin surrounding the wound, in order to afford protection against the digestive action of the pancreatic juice.

The speedy obliteration of the cyst will depend on the continuance, abatement, or removal of the obstructing cause, or the condition of the gland-tissue on the distal side of the obstruction. If there be complete and permanent obstruction of the common duct, the obstruction will continue, and the fistula will remain open. If the obliteration be due to inflammation, the natural outlet may again be established. If an impacted calculus have caused the retention, and the fistula continue to discharge, an effort should be made to remove this body through the fistulous opening. In cases of permanent obstruction with complete removal of the gland-tissue on the distal side, no pancreatic juice will be secreted, and definitive obliteration of the cyst and permanent closure of the fistulous tract will soon take place.

At the end of his paper Dr. Senn submits the following conclusions. 1. 'Cysts of the pancreas are true retention-cysts. 2. Cylindrical contraction or obliteration of the common duct or its branches, and impacted calculi, are the most frequent causes of cysts of the pancreas. 3. A positive diagnosis of a cyst of the pancreas is impossible; a probable diagnosis between it and some other kind of cysts, amenable to the same surgical treatment, is adequate for all practical purposes. 4. The formation of a pancreatic fistula under antiseptic precautions recommends itself as the safest and most expedient operation in the treatment of cysts of the pancreas.'

W. Johnson Smith.

Article 4639.

ENGLISCH ON HÆMORRHAGIA NEURALGICA.

Under this name Dr. Englisch, of Vienna, describes (*Wiener Med. Blätter*, No. 24) a peculiar affection of the lower extremities, accompanied by neuralgia, hæmorrhage, and permanent wasting of the limb, five cases of which have come under his notice. These patients, previously in good health and in comparatively comfortable circumstances, were suddenly, and without any precursory symptoms, seized with severe neuralgic pain in the course of the sciatic nerve. After continuing several days, it was succeeded by rigors and high fever, followed by sweats and evidence of considerable depression, and passing into a continued fever lasting several weeks, and exhibiting maxima of 100° F. to 105° F. On the third or fourth day from the commencement of the sciatic pain the limbs began to swell, a soft elastic mass extending from the ham to the hip, and gradually increasing in width, especially above, but not obliterating the form of the muscles, which stood out as if distended.

A bloody infiltration next spread over the whole surface of the limb, and the veins appeared as pale brown stripes, such as are sometimes seen in septicæmia. The entire skin changed its colour to that caused by deep sugillation.

The connective tissue now became deeply infiltrated, and the bellies of the muscles could no longer be defined, the whole limb having been converted into a tense mass, sensitive to touch and quite stiff. The swelling was always greater on the posterior aspect of the limb, which might be flexed in consequence. The hollows of the ham, and on each side of the tendo Achillis, were obliterated. The feet were œdematous, rarely extravasated, and there might be effusion into the knee-joints, though not into the ankle. Both extremities might be affected, but one always more so than the other.

From the appearance of the skin, tense, shining, and often red, these cases are usually admitted into the surgical wards under the description of cellulitis or phlegmon. They seldom proceed, however, to suppuration or breach of surface, the pain being due rather to the tension and the previous neuralgia. With the subsidence of the fever, the processes of repair or retrogression commence. These consist mainly in a shrinking of all the soft parts, most conspicuous in the muscles: their rounded form is lost, and the calf acquires an ape-like appearance. The skin shrinks at the same time, so that the tension remains almost unaltered. In extreme cases nothing is left but a mass of rigid connective tissue, in which the bones appear as if imbedded. These changes are most marked in the neighbourhood of the ankle, which is completely ankylosed.

In one of the cases which Dr. Englisch had an opportunity of examining, the skin was thin, tough, parchment-like, and so firmly adherent to the subjacent connective tissue as to be dissected off with great difficulty. The fasciæ appeared no longer as separate structures, but were inseparably blended with the surrounding tissue. The veins were thickened, and imbedded in the subcutaneous connective tissue. The muscles of the calf appeared as strands of connective tissue, but the tendons could for the most part be liberated from their sheaths. The proper substance of the muscles had disappeared, the sarcolemma alone remaining, with only a few discs here and there, and numerous oil-globules bore witness to the degeneration. The blood-vessels, thickened, and their lumen reduced or even impervious, were immovably imbedded in a mass of fibrous tissue. The capsules of the knee-joint and of the ankle contained no excess of fluid, but were thickened so as to impair the mobility of the joints. The nerves were not visibly altered, but were imbedded, like the vessels, in a mass of connective tissue. The ends of the bones were normal; and the muscles had undergone little alteration, although paralysed. Beyond evidence of tubercular disease, the other organs were normal.

In a second case which came under observation two years after the commencement of the disease, the ankle was rigidly fixed at a right angle, passive movement being possible only to a very slight extent, and causing intense pain. Movement in the knee was less affected. The rotundity of the calf was quite lost, and the patient walked with great difficulty, and as if on a wooden leg.

The pathology of this disease is very obscure. One might be inclined to look on these cases as severe forms of scorbutus; but in none of them were the previous circumstances of the patients such as were likely to induce scurvy, and in one only did the prodromal symptoms suggest such an origin. The intense sciatic pain was a prominent feature. Rigors, fever, &c., are met with only in severe and acute cases of scurvy; but in such extravasation of blood, sponginess of the gums, and lesions of the lungs and intestinal canal, are never absent; whereas, in these patients there were no petechiæ, and the gums, lungs, and bowels were healthy. So were the kidneys in four cases; in one only was there transient hæmoglobinuria.

In their character, too, the extravasations differ from those of scurvy; they never appear in the cutis itself, but in the subjacent connective tissue and the muscle-substance of the lower extremities only. The effusion, again, is not of normal blood, but rather such as is seen in septicæmia, and after injections of septic and foul matters into the veins. It follows closely the course of the vessels as brown streaks on the surface of the limb. The changes in the appearance of the skin resemble those which accompany deep extravasation; but the effusion is here, as well as in the infiltration of the tissues, a bloody serum, which accounts for the absence of any more or less clearly defined petechiæ.

The changes in the blood itself are a slight diminution in the number of the white cells, and a marked reduction in that of the red discoid corpuscles, which are replaced by spherical and diverse-shaped red cells, in part nucleated, with an astonishing number of the so-called microcytes, or cells resulting from the division of the former. These changes correspond to those which are observed in osteomyelitis, and would indicate the origin of the disease in a grave alteration of the character and composition of the blood.

The consequences and remoter effects, especially the atrophy of the muscular tissue, deserve special study. So soon as the absorption of the infiltration sets in the muscle-substance begins to waste, and the collective structures of the limb are gradually but uninterruptedly transformed into a connective tissue like that of cicatrices. In several cases this transformation is complete; but even in those in which it is not so, and some muscular power is retained, the wasting of the limb persists many years.

The disease seems not to be without its influence on the general health. In one of Dr. Englisch's cases there were already symptoms of pulmonary tuberculosis, but this afterwards advanced so rapidly that the patient died within two years. A second, though her lungs were quite sound at the time, and there was no history of hereditary tendency, speedily succumbed to tubercle of the lungs and genital organs. A third, left helpless by the atrophy of the limbs, sank not long afterwards in like manner.

Such being the rapid course of the disease, the treatment must be energetic. The persistent application of cold seems indicated, with a view to check further hæmorrhage so long as pain continues. When this has abated, the absorption of the exudation must be promoted by stimulating poultices; later by warm fomentations, resolvents in the form of ointments, massage, &c. The early employment of electricity is to be specially recommended, to maintain the functional activity of such muscle-tissue as remains, and endeavours should be made to reduce the callosity and to restore movement to the joints by means of warm baths, &c.

The further treatment must be conducted on general principles. E. F. WILLOUGHBY, M.B.

ARTICLE 4640.

FLEISCHER ON UREA AND URÆMIA.*

DR. FLEISCHER, of Erlangen, finds that 200 grammes of urea given to a dog entirely fail to induce convulsions or any so-called uræmic symptoms. Its diuretic action, however, is remarkable; so much so as to suggest its adoption as a therapeutic agent. Again, 90 grammes of fresh sterilised urine injected into the blood, and 100 into the peritoneal cavity, caused violent vomiting, but no convulsions.

There is nothing new in these observations. He proposes to establish an urinary fistula on one side in dogs, and when they have recovered from the operation to remove the kidney on the other. Then, after having ligatured the ureter until the animal has become uræmic, he would reopen the fistula and collect the urine. If the injection of this into the veins caused a return of the uræmic symptoms, it would follow that the poison which produced the convulsions, &c., was some product of the breaking up of the constituents of the retained urine.

[This experiment appears quite uncalled for and not likely to lead to any result. The 'poison' is not urea; it is not, as Frerichs suggested, carbonate of urea derived from the decomposition of the former. Besides, the experiments of Öppler and Perls long ago proved that urea is formed in, and not merely eliminated by the kidney, for it was not more abundant in the blood of nephrotomised than of healthy animals; whereas it was more so in that of those whose ureters had been tied. This proved that such urea must have been absorbed from the kidney in consequence of the backward pressure from the ligature. But the poison, which is not urea, cannot be a derivative from or product of the decomposition of urea, since uræmia follows extirpation of the kidney when there is no abnormal amount of urea in the blood as certainly as it follows ligature when there is. The poison, therefore, must be something already existing in the blood, and which alike in nephrectomy and ligature accumulates, because its elimination is prevented. The function of the kidney is to eliminate the products of the nitrogenous metabolism; it is these that are retained after either operation; and since the poison is not urea nor a derivative of urea, it is probably an earlier term, something (kreatin, kreatinin, &c.) which is in the kidney converted into urea. If it is to be isolated, it must be from the blood of nephrotomised animals. Feltz's and Ritter's notion that the potash salts are the cause of uræmia, is put out of the question by clinical and chemical examination. Fuhrbinger urges that so typical a form as the uræmia following wasting of the kidney can only be explained on chemical grounds; while that of scarlatina may be due to irritation of some part of the brain or meninges by the absorption of the fever-poison; in fact, that it may be a complex phenomenon. Even where vivisection is illegal, much may and ought to be done in the examination of the blood of uræmic persons, and of the urine when not suppressed.—*Rep.*] E. F. WILLOUGHBY, M.B.

ARTICLE 4641.

WELLBERG ON LEPROSY IN THE BALTIC PROVINCES OF RUSSIA.

THOUGH many of the cases described as leprosy by Wachsmuth in 1867 were probably syphilitic, Drs. Wellberg, Bergmann, and Dehio have collected ample evidence of the prevalence of true lepra tuberosa in the districts bordering on the eastern coast of the Baltic from Riga to St. Petersburg. Bergmann published in 1869 notes of 104 cases described since 1861, of which 14 had come under his immediate notice.

Dr. Wellberg contributes to the *St. Petersburger Med. Wochensch.* of April 6 (18) an account of 24 cases which came under his care in the hospital at Dorpat, from 1878 to 1884. Of these 6 were females and 18 males, including a child of two years. Eleven cases were of the 'tubercular' form so called, or lepra tuberosa; five of lepra anæsthetica; and in the remaining eight the two forms were combined.

In one of the anæsthetic cases there were well-marked 'morphœa' patches of snowy whiteness on the buttocks and extremities, and typical plantar ulcers of leprosy; in another, map-like discolorations of the skin of lighter and darker pigmentation; and in a third pemphigus blisters, together with white and shining radiating scars. He mentions these particularly on account of their rarity.

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* *Wien. Med. Blätt.*, No. 27.

Fifteen patients were Esthonians, four were Letts, three Russians, and two Jews, the German population not contributing any cases. The earliest age at which the disease appeared was two years, the latest forty-four. In the majority it was between twenty and thirty years.

Eleven were married, eleven single, the condition of two being undetermined. Two of the married were childless; in only one instance was a child affected, the other issue of this marriage, as well as those of eight others, varying in number to as many as six, being perfectly healthy. Heredity could be traced in four out of the twenty-four, and in none of the eleven cases of married patients was the husband or wife also affected, so that all notion of contagiousness was excluded.

There could be no doubt as to the diagnosis in any of the twenty-four, the symptoms corresponding closely with those described by Danielssen and Boeck in Norway, and by Bergmann in Livonia.

Dr. Wellberg had no opportunity of making a *post mortem* examination of the presence of the bacilli, but he has often demonstrated in freshly extirpated leprous tubercles.

In his hands all treatment proved unavailing, even the creasote pills, warmly recommended by Langerhaus, of Madeira.

Of the 104 cases alluded to above, seventy-seven were from Livonia, seventeen from Esthonia, three from Courland, and seven from the government of St. Petersburg (all these coming from the eastern side of the Peipus). In Livonia itself they were not equally distributed, but certain districts appeared as centres; though Dr. Wellberg could not find any evidence that, as has been alleged, the character of the locality, or the habits of the people, especially the excessive use of fish-diet, furnished an explanation of the prevalence of the disease. Yet, as he observes, nothing in this direction can be learned in the wards, and hitherto no local investigations have been undertaken. E. F. Willoughby, M.B.

Article 4642.

BINZ ON SOME NEW REMEDIES.

Dr. Binz, of Bonn, contributes to the *Wiener Med. Blätter*, No. 28, notes on a few drugs of recent introduction.

Arbutin.—The principal constituent of the leaves of the Uva ursi is a crystalline, slightly bitter, non-irritating alkaloid, non-poisonous in doses of eight grammes (ʒii.). In the bladder, it appears partly broken up into sulphate of hydrochinon. Both bodies retard putrefaction, whence the value of arbutin (and in a less degree of the leaf) in catarrh of the bladder, a remarkable instance of which Binz saw in a case of nine years' duration in a man aged 63, to whom he gave 1 gramme (15 grains) three times a day in the form of powder. It costs 30 pf. (about 4*d.*) the gramme.

Eucalyptol is an ethereal oil, colourless and aromatic, the chief constituent of the Eucalyptus globulus. Its chemistry has been worked out by Hugo Schultz and Schleinitz; and others have observed in man what Binz had demonstrated in animals, that, while perfectly non-irritating to the most delicate tissues, it paralyses, as it were, the lymph-cells, and deprives them of the power of migrating through the walls of the vessels. Even when they have partly protruded, they may be seen under its influence to assume their spherical form and, losing their contractility, to fall back into the general blood-current. This remarkable property explains the control exerted by eucalyptol over suppuration.

Mercury-urea is a combination of corrosive sublimate and urea ($HgCl_2 + CH_4N_2O$), which in cheapness, stability, and absence of any irritating action on the skin, far surpasses all previous preparations designed to render corrosive sublimate available for subcutaneous injection. It is freely soluble in water, and does not precipitate albumen. One gramme dissolved in 100 cubic centimètres of distilled water remains unchanged for over a week. The dose for injection is 5 milligrammes to a centigramme, or 0·3 gramme as a maximum. In 1650 injections only ten were followed by abscesses, and six of these occurred in one individual specially prone thereto. A somewhat similar preparation, much used in the treatment of syphilis, is contained in the German Pharmacopœia, the *Hydrargyrum cyanatum*, a solution of mercurous cyanide, $HgCy_2$.

Naphthalin ($C_{10}H_8$) is a derivative of benzol, and allied to phenol. When pure, it appears as thin white shining rhombic crystals, with a strong pungent odour and burning taste. Insoluble in water, it dissolves with ease in alcohol, ether, and fatty and ethereal oils. It is a powerful parasiticide, useful in scabies, and also in antiseptic surgery. Rossbach states that it exerts a considerable antimycotic action in enteric fever, even to the extent of cutting short the disease. For this purpose, he gives 3 to 5 grammes daily in divided doses. It undergoes only partial decomposition in the bowel, depriving the fæces of odour. It gives a dark colour to the urine, and in large doses irritates the kidneys. In putrid states of the contents of the bowel, it has established its place as a remedy of approved value.

Osmate of Potassium and *Hyperosmic Acid.*—The latter is an anhydride of the form OsO_4, with a neutral reaction, easily parting with its oxygen to organic matter. Four to six drops of a 1 per cent. solution are of use, injected subcutaneously in peripheral neuralgia. It exerts a very slight local irritation on the skin, but, as one might expect from its pungent odour, it irritates and inflames the mucous membranes. The acid is a yellowish-white crystalline mass, soluble in water. The potassium salt is darker in colour, forming a red solution in water, with an alkaline reaction. Heated, it breaks up into hyperosmic acid and osmic hydroxide. It appears useful in epilepsy, given in the form of pills containing 1 milligramme (with kaolin), raised to 15 milligrammes daily.

E. F. Willoughby, M.B.

Article 4643.

IGNATIEF ON A CASE OF ECHINOCOCCUS OF THE LIVER.

Dr. Ignatief, of Moscow, has reported a case of echinococcus of the liver. Death took place during operation from the impaction of an echinococcus-cyst in the right auricle. In December last Alexandra Lebedewa, a remarkably well-developed and healthy girl, aged 18, was admitted into the hospital on account of a tumour in the epigastrium. Her parents were peasants in comparatively easy circumstances, and she had for over a year been housemaid at the country seat of a gentleman near Moscow, where a number of dogs were kept, with which she was in the habit of playing. She had never had any illness, and her room was dry and airy.

In June she noticed a tumour of the size of a fist in the epigastrium, which grew rapidly until the middle of the following month, when it seemed to come to a standstill. The only inconvenience she felt was some shortness of breath, and a sense of constriction of the chest, on running upstairs or other exertion.

The only deviations from perfect health noticed in a rigid examination of every organ were the direct mechanical effects of the presence of the tumour, in an elevation of the diaphragm and displacement of the heart towards the left, its impulse being felt outside of the mammillary line in the fourth interspace. There was an entire absence of pain, and the appetite and digestive functions were unimpaired. Palpation of the abdomen revealed, about 4 centimètres above the navel line, the sharply marked margin of a tumour, with a median notch, extending to the left and downwards to the linea alba, and then upwards to the right. The dulness, which was complete, had a somewhat trapezoidal area, the smaller base to the right and the larger to the left, moving with respiration, but without any friction-sound.

After excluding every other possible form of tumour, Dr. Ignatief came to the conclusion that it could be no other than an echinococcus-cyst, though the 'frémissement hydatique' of Briançon was wanting, as it often is when these cysts are simple. No exploratory puncture was made, the nature of the case being considered clear. In view of the commencing interference with the functions of the lungs and heart, and the possibility of the rupture of the cyst, already very tense, and at the wish of the patient, operation was determined on, and undertaken by Dr. Kusmin. She was soon brought under the influence of chloroform, the quantity used not amounting to one ounce. The skin having been washed with soap (balls of charpie moistened with a 3 per cent. solution of carbolic acid being used), dried, and washed again with a 4 per cent. solution of boracic acid, an incision 7 centimètres long was made in the linea alba, between the ensiform process and the umbilicus, the vessels being seized with Péan's forceps and tied with catgut. The peritoneum having been reached, a small incision was enlarged by scissors to the extent of the wound, and the flaps of the peritoneum secured by silken ligatures, three on each side, and one above and below, so as to expose the structures within the abdominal cavity. A fibrous band, the suspensory ligament of the liver, was thus brought into view, and to the left of it a cystic tumour. The next step was, as previously resolved on, to connect by sutures the visceral and parietal layers of the peritoneum so as to obviate the escape of the fluid into the abdomen. Four such sutures were to have been applied to the surface of the liver, one on each side. While the third was being introduced the withdrawal of the needle was followed by the escape of some serous fluid, the quantity of which rapidly increased. While the fourth suture was being passed at the upper angle of the wound, the assistant in charge of the pulse noticed its sudden arrest, without any warning or previous symptom of danger. The patient made one deep gulping inspiration and then a shallow one, which was her last, accompanied by rapidly increasing cyanosis. The operation was immediately suspended, the tongue drawn out, the head lowered, and artificial respiration begun on Silvester's method. No success attending these measures tracheotomy was performed, and the phrenic nerve faradised. Dr. Sakoff, suspecting some obstruction of the trachea, applied his mouth to the tracheal tube, and sucked out some blood and mucus. But all efforts were fruitless, the cyanosis grew deeper, the contraction of the diaphragm excited by the faradic current became weaker, and at length ceased. These attempts at resuscitation were continued for half an hour, during the whole of which time not a single beat of the heart had been felt, and the patient was at length left to her fate.

A necropsy was made by Dr. Rosenberg. The entire left lobe of the liver appeared as a collapsed cyst, of the size of an infant's head, with walls of unequal thickness. In front, where the operation had been begun, the sac consisted only of Glisson's capsule and the adherent wall of the echinococcus-cyst; elsewhere there was a layer of liver-tissue, which gradually thinned off towards the transparent part in front. The abdomen contained a large quantity of clear fluid, tinged with blood, which had escaped from the cyst. Ligature of the inferior vena cava above the diaphragm being found impracticable on account of the fibrous adhesions, the pericardium was opened and the ligature applied within the sac; but a fold of the pericardium having been accidentally included, the thread slipped off so soon as the vein was divided below it; and, while the connections of the thoracic organs were being severed, a whitish sausage-shaped body was seen to emerge from the right auricle through the vena cava. Its escape was, however, prevented in time by a suture; and the heart and lungs were removed together. The body in question was now found to occupy great part of the right auricle, which as well as the ventricle was empty. Further examination showed it to be the larger half of an echinococcus-cyst crumpled up and rolled upon itself. Unrolled, the cyst presented an irregular round surface of about 10 centimètres in diameter, the wall being 3 to 4 millimètres thick. It had been cut through in the section of the vena cava, and the other half fell therefrom into the pleural cavity. On following the course of the inferior vena cava towards the liver there was seen, just below the diaphragm, a circular aperture with somewhat irregular border and about 1½ centimètre wide, opening immediately into the cyst, which occupied the left lobe of the liver, the ragged margins hanging like flaps into the interior of the vein. It had evidently been produced by the passage of the cyst through the extremely thinned walls of the sac and vein.

The lungs did not present that degree of engorgement which is usually seen to accompany death by suffocation, though there were some slight ecchymoses on their surface and hæmorrhagic spots in their substance. In the right branch of the pulmonary artery a shred of membrane was found rolled up to the size of a millet-seed, which, when examined, proved to be a fragment of an echinococcus-cyst. The congestion of the membranes and substance of the brain, and the engorgement of the veins of the neck, were such as might have been expected in obstruction of the right auricle.

E. F. Willoughby, M.B.

ARTICLE 4644.

MARAGLIANO ON THALLIN, A NEW ANTIPYRETIC.*

THIS new antifebrile remedy was first composed by Skraup, of Vienna. Jaksch investigated its therapeutic properties experimentally. It is the hydride of parachinanisol, and belongs to the chinoline group.

There are three salts of thallin: the sulphate, the hydrochlorate, and the tartrate. They are all white in colour, with a brownish tinge, and they have an aromatic odour; they are bitter and unpleasant to the taste; they are soluble in water; the solution is strongly acid in reaction, and with perchloride of iron it assumes a whitish colour.

These salts have an antifermentative action. Pisenti, in Albertoni's laboratory at Bologna, found that they prevented the decomposition of urine.

As to physiological action, the present state of knowledge is as follows. Apart from the unpleasant taste, thallin does not give rise to any ill effect when taken in doses of 0·25 gramme to 0·75 gramme (about four to eleven grains). Six grammes, in repeated doses of half a gramme each, when taken in six hours, did not give rise to any appreciable gastric disturbances.

The drug is eliminated by the urine, where its presence may be detected within half an hour or an hour after being taken. Elimination, according to Jaksch, is completed in from twenty-four to forty-eight hours. According to Professor Maragliano, the greater part of the drug is eliminated in about ten hours, and entirely so after twenty hours. A greenish colour is communicated to the urine. Perchloride of iron gives a purplish reaction.

Before testing the therapeutic action of the remedy, Professor Maragliano investigated its effects on the arterial blood-pressure, on the frequency of the pulse, and on respiration in apyretic persons. The salt employed was the sulphate of thallin.

The results were as follows. 1. The intra-arterial pressure does not present appreciable modifications. In the first hour after the administration of the drug there was a slight tendency to an increase; in the second hour, to a diminution. The differences, however, were small. The action on the heart, however, must be regarded as tonic, not depressing; for, as will be seen presently, there is conspicuous dilatation of the cutaneous vessels, which should lower the intra-arterial pressure. Pisenti had analogous results on rabbits. 2. The frequency of the pulse is slightly diminished. 3. The frequency of respiration also presents a slight diminution.

The action of thallin on the temperature has been studied by Jaksch and by Pisenti. Jaksch found it to lower considerably the temperature of healthy animals. In apyretic men, on the contrary, he did not observe any appreciable effect. Professor Maragliano undertook some researches on the same point. He found that the temperature in apyretic persons is slightly influenced by the drug, doses of half a gramme causing a fall of 0°·5 to 0°·8 C. (0°·9 F. to 1°·4 F.)

The effect on febrile temperatures was also studied. Amongst the conclusions are the following. 1. The antipyretic action of thallin shows itself after an hour; the thermic depression, if less than a degree, reaches its maximum after two hours; if more than a degree, after three or four hours. 2. The duration of action for doses of 0·10 gramme is from two to four hours; for doses of 0·25 gramme from two to nine hours; for doses of 0·50 gramme and upwards, from two to ten hours. 3. The antipyretic action of a given dose is not always the same, but varies (*a*) according to the temperature at the commencement of the administration of the drug, the higher the temperature the greater being the effect; (*b*) according to the time of day, not following any fixed rule, and probably depending on the oscillations of thermic resistance and on conditions beyond our observation; (*c*) in different individuals placed in like circumstances as regards illness, initial temperature and dose. 4. When several doses of thallin are administered successively, so that each dose is given before the effect of the preceding one has passed away, their antipyretic effects are united.

In the examples given by Professor Maragliano to illustrate the action of the drug, doses varying from 0·1 gramme to 1 gramme produced a fall of temperature varying from 0°·7 C. to 4°·7 C.

To fix the mode of action of the drug, further researches were undertaken to determine as exactly as possible the following points: 1, its influence on the peripheral circulation in the febrile and in the non-febrile conditions; 2, the influence it has on the loss of heat by the skin; 3, its influence in the apyretic on elimination of carbonic acid and of urea; 4, its influence on the respiratory capacity of the blood.

Mosso's plethysmograph showed a marked dilatation of the vessels both in the febrile and in the non-febrile. This dilatation in febrile states corresponds to the lowering of the temperature, and both phenomena pass off together. Corresponding also to the dilatation of the vessels, the loss of heat is found by the calorimeter of Winternitz to increase. At the same time a profuse perspiration breaks out. The elimination of carbonic acid, estimated by Pettenkofer's method, was reduced nearly one half. The amount of urea excreted was lessened nearly one third. The respiratory capacity of the blood under the influence of thallin was measured by the author's own method, and was found to be diminished.

The action of thallin would appear, therefore, to be analogous to the action of antipyrin; that is, it acts by dilating the vessels, by increasing the loss of heat, and by diminishing organic combustion, through its action on the respiratory capacity of the blood.

The author promises, in a later paper, to deal with the employment of thallin in various diseases, the manner of administering it, and its value in comparison with antipyrin.

WILLIAM R. HUGGARD, M.D.

ARTICLE 4645.

ISAKOFF ON ABSORPTION BY THE STOMACH IN HEALTH AND IN DISEASE.

FOLLOWING the suggestion of Professor Penzoldt, Dr. August Faber (*Erlangen, Inaugural Dissertation,* 'Ueber die Resorptionsfähigkeit der menschlichen Magenschleimhaut im gesunden und kranken Zustand,' 1882) undertook a long series of comparative experiments (in twenty-three healthy individuals, in two drunkards, in ten cases of gastric ulcer, eleven of dilatation of the stomach, &c.) to determine any possible difference in the rapidity of absorption from the healthy and the diseased stomach. The method of examination consisted in the administration of iodide of potassium, with subsequently detection of the salt in the saliva. In rough outline, Dr. Faber and Professor Penzoldt (*Berlin. Klin. Wochensch.*, 1882, No. 21) arrived at the conclusion that there existed an important and characteristic difference in rapidity of absorption between a healthy and a diseased stomach, and that their method presented a good diagnostic means, since the healthy viscus absorbed iodide of potassium not later than in fifteen minutes, while a dilated or catarrhal stomach absorbed the salt after a longer interval (twenty-seven minutes, forty-five, &c.), and the stomach containing an ulcer in a shorter time. Faber's experiments were repeated by Dr. Wolf, who, while admitting the general diagnostic value of Penzoldt and Faber's method, found that it was permissible to speak of any morbid retardation of absorption only when the latter ensued later than in 1½ hour. He found, further, that the process was somewhat retarded (occurred in 1 hour 42 minutes) in acute and chronic gastric catarrh, and greatly retarded in some cases of carcinoma of the stomach, where iodide of potassium made its appearance in the saliva only about three or four hours after its ingestion.

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* *Gazzetta degli Ospitali,* July 5, 1885.

In view of the essential contradictions between the statements of Faber and those of Wolf, Dr. Isakoff has taken up the subject (*St. Petersburg Inaugural Dissertation*, 1883) and repeated the experiments in Professor Manassein's clinic. The persons experimented upon received (in the morning, on an empty stomach) a capsule with ten grains of iodide of potassium, followed by a certain quantity of water; the iodide was detected by moistening with a drop of fuming nitric acid a starched strip of paper soaked in the patient's saliva, the reaction being first tested five minutes after the ingestion of the salt, and subsequently every three minutes. At each observation there were noted—1, the time of appearance of first traces of the colour reaction; and, 2, the time of appearance of the markedly pronounced reaction. Sixty observations were made in healthy subjects, which showed (1) that the time of the first appearance of the iodide in their saliva varied between five and twenty-three minutes, with the average 9·85; (2) that the time of the occurrence of a markedly pronounced reaction varied between eight and thirty-one minutes, with the average fourteen. Seventy-two observations were made upon patients suffering from cancer of the stomach (five cases), gastric ulcer (three cases), and gastric catarrh. No marked retardation of absorption was observed in any carcinomatous cases, where the time of the appearance of first traces varied from eight to twenty minutes, with the average twelve, and that of the marked coloration between eleven and twenty-nine minutes, with the average 16·3. No acceleration of the absorption was found in cases of gastric ulcer, the time of the traces varying from five to fourteen minutes, with the average 10·4, and the time of the marked coloration from eight to seventeen minutes, with the average 14·8. In cases of gastric catarrh, the time of marked reaction varied from eight to thirty-two minutes. In twenty-one cases the first traces of the iodide appeared in the saliva in eight minutes after ingestion; in twenty-three cases, an intense coloration of the testing paper was obtained in eleven minutes; in other words, in very numerous cases of gastric catarrh rapid absorption was present. The results obtained, as well as some theoretical considerations, lead Dr. Isakoff to the opinion that it 'would be hardly possible to form, from the rapidity of absorption in the stomach, any reliable adjuvant means for diagnosing diseases of the organ.' The rapidity of the process is determined not only by the state of the stomach, but also by many other conditions out of it, to which belong, for instance, febrile state (N. A. Zasetzky), the temperature of the solution absorbed (Zasetzky), perspiration, temperature of the air (Tumas), &c. V. Idelson, M.D.

Article 4646.

WILLIAMS ON THE COMPRESSED AIR-BATH.

Dr. C. Theodore Williams has reprinted from the *Brit. Med. Jour.* (April, May 1885) three lectures on the compressed-air bath and its uses in the treatment of disease. After referring to the symptoms noticed under very high pressures in the pneumatic tubes used by engineers, and the accidents (chiefly coma, followed by death, or by paraplegia, which was in some cases permanent, or by complete recovery), Dr. Williams describes the bath, which has been erected in the new buildings of the Hospital for Consumption, Brompton. The air, compressed by a pump driven by a steam-engine, is filtered through cotton-wool in a receiver, and forced into the air-chamber, which is a circular iron room, 10 feet in diameter and 8 feet high, with air-tight walls. The chamber is meant to accommodate four persons. The air can be changed five times in two hours. During compression the temperature rises slightly, and falls during reduction of pressure. The quantity of moisture held in suspension is greatly increased while the pressure is maintained. A bath or sitting occupies two hours; half an hour being spent in gradually increasing pressure and half an hour in gradually reducing it. The rate of increase or decrease should be one pound in two to three minutes, and the maximum ten pounds (about two-thirds of an atmosphere). A pressure of seven and a half to nine pounds is sufficient for most purposes. The accidents above referred to have generally followed on the sudden reduction of pressure.

The effects of the increased pressure are most marked on the organs of respiration and circulation; the tendency is to render the skin and lungs, organs which are fully exposed to the influence of the pressure, anæmic, while the blood is driven in towards the organs protected from air-pressure to the brain, heart, liver, spleen, and kidneys; the tendency is to reduce the pressure on the right side of the heart, and hence to slow the heart and to increase pressure on the left side. The quantity of urine and of urea is increased, the saliva is said to be increased, and the temperature to be raised in the rectum but lowered in the axilla. Respiration is slower, deeper, and easier, but expiration is, relatively to inspiration, prolonged and less easy; the circumference of the chest and the vital capacity are increased, the lungs become more expanded, the cardiac dulness diminished, and the cardiac sounds diminished in intensity; the pulse is slower and smaller, with increased tension; the pulse-respiration ratio is not disturbed; the superficial capillaries and the veins contain less blood. The increased supply of oxygen leads to increased oxidation and tissue-change, evidenced by a rise in the amount of carbonic acid and urea excreted, and, after the earlier baths, by a loss of weight; as the appetite is improved this loss of weight is replaced by a gain.

Compressed air tends to distend the bronchioles and to open up lobules which have become collapsed; it subdues cough and bronchial spasm, probably by relieving congestion. In emphysema with tense, large lung, a course of compressed-air baths leads to relief of dyspnœa and cough, deeper and fuller respiration, diminution of thoracic distension, increase of vital capacity, return of areas of cardiac and hepatic dulness in the chest, and a wider diffusion of breath sounds heard on auscultation. The improvement often persists for a long time, and begins to be apparent from the first baths. As the girth of the chest is diminished while the vital capacity is increased, it seems reasonable to suppose that the improvement is brought about by the diminution of bronchial congestion and spasm, allowing the alveoli to collapse to their normal dimensions. In chronic bronchitis, whether associated with emphysema or not, compressed-air baths do good apparently by diminishing the amount of blood in the bronchial mucous membrane and so checking exudation (which embarrasses the lymphatics) and secretion. The larger amount of oxygen supplied must also be of advantage both in chronic bronchitis and emphysema. Compressed air is of use in spasmodic asthma, not only when catarrh is present, but also, according to Dr. Williams, in pure neurotic asthma; the benefit is in some cases permanent, the severity and frequency of the attacks being reduced. Dr. Williams has not yet used the bath in a sufficient number of cases of chronic phthisis to be able to speak with authority, but in five out of six cases a gain of weight followed a course of baths. He believes that, by opening up the apices and reducing congestion, compressed air may be a valuable prophylactic. In the anæmia of young women, the baths do good apparently by the increased supply of oxygen. In chronic otorrhœa and in chronic laryngeal and pharyngeal catarrhs the baths relieve congestion, and they are recommended by Sandahl and Oertel in whooping-cough. Dr. Williams has derived no advantage from their use in pleuritic effusion with consolidation of the lung. Compressed-air baths are contra-indicated in pyrexia, tendency to hæmorrhage, diseases of the brain or spinal cord, kidneys, spleen, liver, intestines or uterus, in phthisis with cavities (the danger feared being rupture of an aneurysm), and in disease of the left side of the heart; congestion of the right side would probably be relieved. The number of baths generally required is from thirty to sixty. DAWSON WILLIAMS, M.D.

ARTICLE 4647.

REBER ON THE THERAPEUTIC PROPERTIES OF EUPHORBIA PILULIFERA.

IN *Der Fortschritt*, June 20, 1885, Dr. B. Reber says that some of the therapeutic properties of the *Euphorbia pilulifera*, which were lately ably described by Dr. A. Marsset (in the *Therapeutic Gazette*, 85, p. 92) were known long ago; and although no perfect and exhaustive treatise has yet been published, this plant promises, from what is taught by the still limited experience, to become a valuable agent in the treatment of affections of the respiratory organs.

Piso (*Opera*: Amsterdam, 1658) was the first who pointed out, although in a very incomplete manner, the medicinal virtues of the Euphorbia pilulifera. Among other statements, he says that the fresh leaves, masticated or bruised, placed on wounds from snake-bite, will not only soothe the pain but also destroy the poison and effect a speedy cure, and that a pinch of the powdered herb taken in a mixture will restore the vital power debilitated by the poison.

Ainslie (*Materia Indica*, London, 1826) mentions an Indian variety of Euphorbia with lilac-coloured blossoms, probably a plant identical with the Euphorbia pilulifera, the fresh milk of which is advantageously employed by native practitioners in the treatment of skin-diseases. Dr. Marsset, however, doubts that the plant described as and called Euphorbia pilulifera, by Ainslie, is the same plant as that which is known by this name at present; it may rather be another species.

The employment of the Euphorbia pilulifera in certain complaints of the lungs is entirely novel. Dr. Marsset tried it with most satisfactory success in forty cases of nervous asthma, either without complication or complicated with chronic bronchitis. Piso also noticed similar success in his treatise on the *Euphorbiaceæ*.

The Euphorbia pilulifera belongs to the family of the Spurges (*Euphorbiaceæ*), which includes more than 3,000 species. It is indigenous only to tropical countries, and is found in great abundance in Florida, Mexico, Brazil, and Peru, and likewise in Asia, Africa, and Australia. When fresh, its milk possesses certain remarkable properties. It acts in proportion to the dose as an excitant, or its energy increases as a powerful poison in the same manner as croton-oil. This herb, which is an annual, is known by several popular names, *e.g.* snake-herb, cat's hair, &c. It exhibits several distinct varieties, according to the climatic and geological peculiarities of the different countries where it grows as a common weed.

The fibrous portion of the fresh plant presents a reddish colour, which changes on drying into red-dish-brown. The stem is about 16 by 15 inches high; it is cylindrical, more or less recumbent, usually single, sometimes also scantily provided with branches, and is covered, especially towards the top, with yellow hair, consisting of thick rectangular cells, varying in number, and diminishing in size towards the apex of the hair, where one single cell forms a triangular point.

The leaves are obovate-lanceolate, delicately serrated, and sessile, and are placed opposite in pairs. They are from one and a half to two inches long, one inch wide, and are invested on both their surfaces with soft fine hair. The midrib is strong, and sends off a few irregular nerves. The minute, reddish-white, axillary blossoms, are arranged around a short peduncle, forming a kind of globular capitulum. Sometimes, especially, at the lower part of the stalk, two such globular groups occupy one peduncle, which always turns alternately to one or the other side of the pair of leaves. The fruit is at first red, then green, and when ripe, brown, consisting of three carpels, each cell of which contains one rough reddish seed, resembling a coffee-bean.

All the active components of the plant are readily soluble in water, which is likewise the most convenient vehicle for all the pharmaceutical preparations of this Euphorbia. The maceration or decoction has an acid reaction, and presents, when treated with salts of iron, a dark-violet, almost black colour. It coagulates albumen, and would seem to contain tannin. Iodide of potassium and potassic-mercuric iodide not yielding precipitates, it may naturally be concluded that either no alkaloids whatever, or only traces of them, are present. The aqueous extract of this Euphorbia forms on evaporation a reddish-brown grumous mass of aromatic fragrance and of a characteristic, slightly styptic taste, which may be due to the presence of tannin. Evaporated to dryness it readily dissolves in water, but is insoluble in alcohol, ether, and chloroform.

Dr. Marsset, in his physiological experiments on animals in Professor Dujardin-Beaumetz's laboratory, employed the aqueous extract, either pure or with addition of a small quantity of alcohol, which, however, in no manner influenced the results. Immediately after a subcutaneous injection, more or less toxic symptoms became manifest. The fatal dose for a guinea-pig varied between 50 and 60 grammes (℥iss.—℥ij.) of the aqueous extract, which is equal in power to 3 or 4 grammes (45 to 60 grains) of the dry herb. Experiments prove that the poison has not an accumulative effect, but is rapidly resorbed. Each injection exceeding 5 centigrammes in 1 gramme of water (1 grain in 20) caused abscesses. Its internal administration produced intense irritation of the mucous membranes, but in a varying degree in different animals. When it is applied to the healthy skin, even after many days' continual use, no effect takes place. No abnormal redness of the tongue and the pharynx is brought on by the aqueous extract, neither will the mucous membrane of the anus be affected. After a weak toxic dose the pulse very rapidly rises in an alarming degree, then suddenly falls, and soon ceases. The heart first violently contracts, and afterwards abnormally dilates. After very toxic doses the circulation is immediately suspended, but the vessels show no change in diameter. The Euphorbia pilulifera neither causes alteration in the lungs and in the spinal cord, nor does it affect sensation and motor power, or the functions of the muscular system and of the secretory glands. No chemical reagent being yet known, it is impossible to demonstrate the presence of the poison in the different parts of the body. The active principle of the plant seems to be a gum or a resin, which, according to several observations, is eliminated by means of the liver.

Numerous experiments on patients have been carried on. Either the aqueous extract or a direct infusion was employed, and asthma, with its various complications, has in many cases been cured or much relieved. The best effect has been observed in chronic bronchitis, several cases of which rapidly recovered. The effect of this medicine, however, must be carefully watched, as, by its action on the stomach, it frequently causes nausea and vomiting. It is most conveniently taken at meal times, 0·05 to 0 1 gramme (1—1½ grain) of the extract or a corresponding dose of the infusion of the dry herb, *i.e.* 7 to 8 grammes (110 to 125 grains), in 1 kilogramme (nearly 2 lbs.) of water. A small quantity of alcohol must be added to the extract, in order to preserve it some time. A tincture may also be prepared with diluted alcohol (1 part of the plant to 5 of fluid), of which from 10 to 30 drops are daily taken. From the present experience of the action of this herb, the following conclusions may be drawn.

1. The active principle of the Euphorbia pilulifera is soluble only in water; it is a violent poison, and therefore requires great precaution in its employment.

2. It acts directly on the respiratory system, without affecting other organs. It has a very beneficial effect in asthma and allied ailments. The daily dose must not exceed 1 gramme (15 grains) of the dry herb.

FERD. ADALB. JUNKER, M.D.

ARTICLE 4648.

REBER ON ANTISEPTIC PREPARATIONS.*

DR. B. REBER communicates in *Der Fortschritt*, May 5, 1885, No. 9, an abstract of his paper on the antiseptic preparations in use in the surgical clinic of the University of Geneva and in the 'Hôpital cantonal,' which he first published in *L'Union Pharmaceutique* in 1883, whence it was copied in E. Bouchut's *Compendium annuaire de Thérapeutique* for 1884.

Many antiseptic preparations have within late years been suggested and spoken of in current periodical literature, and introduced into practice by surgeons of different countries. Corrosive sublimate and carbolic acid, upon trial and extensive experience, universally find the greatest favour.

Of these, the *preparations of corrosive sublimate* seem to hold at present the first rank. For the treatment of wounds during and after operations, a solution of one part of sublimate in 1,000 parts of distilled water is employed. This solution ought always to be filtered before use. A small proportion of common kitchen salt was formerly added, but, causing occasionally irritation of the skin, is now omitted.

For the preparation of sublimate-gauze, pure gauze is cut into long strips of convenient width and steeped in the following solution.

Distilled water	900·0 grammes	(f. ℥xxxi.)
Corrosive sublimate ...	2·5 „	(f. ℈ii.)
Glycerine	100·0 „	(f. ℥iii.)

After having been well squeezed, and dried in the sun or in a current of air, in a place absolutely free of dust, the bandages are kept in a well-closing tin box.

Sublimate cotton-wool is prepared with the same solution in the same manner. Pure medicated cotton-wool is cut into convenient size and rolled up before being treated with the fluid, else the layers will not readily separate.

Carbolic acid will certainly not easily be displaced by other antiseptics, however much their virtues may be extolled. A solution of 2½ per cent. of carbolic acid will generally suffice for the treatment of common wounds. A solution of 5 per cent., which is the greatest quantity of carbolic acid soluble in water, may be kept always in readiness, and be more diluted according to convenience. Such a concentrated solution is occasionally employed for very unclean wounds. The same is also used for the spray, further dilution taking place by the admixture of the steam.

For the preparation of carbolised gauze there are used a solution of

Powdered colophony...	200 grammes	(℥vii.)
Stearine	100 „	(℥iii. ss.)
Alcohol of 94 per cent.	2,000 „	(f. ℥lxxii.)
Pure carbolic acid	150 „	(f. ℥v.)

With the alcohol, in which the colophony has been previously perfectly dissolved, the molten stearine is gradually mixed, the fluid being continually stirred. To this, after filtration, the pure liquid carbolic acid is added. The gauze is soaked in this liquid, then slightly squeezed, and exposed for a moment to the air, taking care not to dry it completely before folding, else it will become too stiff. It is to be kept pressed together as tightly as possible in a hermetically closing tin box. The quantity of fluid prepared according to the above prescription will be sufficient for 35 yards of gauze. The colophony being apt to irritate the skin, the smallest quantity possible of it ought to be used.

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* 'Préparations Antiseptiques,' par B. Reber, Pharmacien-en-chef de l'Hôpital cantonal de Genève.

Carbolised Threads.—Raw silk threads, closely tied together, are immersed in a porcelain cup filled with mother white bees'-wax, which is covered whilst hot with a layer of about 2 per cent. of carbolic acid. The silk is kept close to the bottom of the cup by means of small glass sticks. The superfluous wax, after having perfectly cooled and stiffened, is removed by wiping the threads with a piece of linen. The threads, when ready, are wound up on reels and kept like catgut.

Antiseptic Sponges.—The sponges, after having been beaten with a wooden mallet, in order to remove all impurities and foreign bodies—viz., minute shells, sand, dust, &c.—they are carefully washed in tepid water, squeezed as dry as possible, and placed into a solution of 3 per cent. of permanganate of potassium for three to five hours. Then they are washed in flowing water, when they will be ready for bleaching, which is done by placing them in a tub filled with a solution of 20 to 30 per cent. of disulphate of sodium, to which diluted (40 per cent.) hydrochloric acid is added, whereby a considerable quantity of sulphurous acid is evolved. After ten to fifteen minutes, when the bleaching process will be completed, the sponges are again washed in flowing water, and kept for use in a solution of 5 per cent. of carbolic acid.

Iodoform Gauze.—The following has proved the best preparation for iodoform gauze.

Colophony	50	grammes	(℥i ʒvi.)
Alcohol of 94 per cent...	600	„	(f. ℥xxiv.)
Pure glycerine............	25	„	(f. ʒvii.)
Powdered iodoform ...	40	„	(℥i. ʒiii.)

The gauze, after having been well soaked in the previously filtered fluid, is sprinkled equally all over by means of a dredging-box with finely powdered iodoform, which, by turning and twisting the gauze, is made thoroughly to penetrate the meshes of the tissue, after which it is kept in the same manner as the carbolised gauze. The above-stated quantity will be sufficient for the preparation of about three yards of gauze.

Catgut.—According to Lister's directions, catgut ought to be kept in carbolised oil, but this mode of preservation has proved unsatisfactory. In fact, occasionally catgut, even after having remained a long time in the oil, contained microbes, which gave rise to infection. Dr. Koch maintains that 10 per cent. carbolised oil is not antiseptic and does not possess any disinfecting power. Dr. Roux (*Revue Médicale*, 1884) undertook in Professor Kocher's clinic in Berne a series of successful trials with the essential oils of turpentine and juniper. He placed catgut for eight days in the essential oil of rectified turpentine, washed it during a quarter of an hour in absolute ether, and finally preserved it in absolute alcohol. Silk threads were also treated in the same manner with the best results.

The catgut used in the Geneva hospital is wound in single layers on small slabs, immersed for twenty-four hours in essential oil of juniper, and then for other twenty-four hours in glycerine, and finally kept in absolute alcohol.

Thymol is but rarely used. Thirty grammes (℥i.) of the following solution in one litre (34 ounces) of distilled water forms a solution of 1 in 1,000.

Thymol	25	grammes	(ʒvii.)
Alcohol	225	„	(f. ℥xviii.)
Glycerine	500	„	(f. ℥xviii.)

This was exclusively used for children, but has now been almost entirely given up on account of its want of reliable effect. Carbolic acid, on the other hand, even in 1½ per cent. solution, is considered by the majority of surgeons too dangerous for children, having caused too frequently rapid symptoms of intoxication. Therefore, a solution of 5 per cent. of boracic acid has been substituted for children, with signal success. *Boracised cotton-wool* is also employed, the preparation of which is very simple. Medicated pure cotton-wool, cut into the required size, is soaked in a *hot* solution of boracic acid of the desired strength, squeezed, dried, and kept for use in the same manner as the cotton-wool.

FERD. ADALB. JUNKER, M.D.

ARTICLE 4649.

FORSTER—HOW MEDICAL MEN OUGHT TO CLEANSE THEIR HANDS.

PROFESSOR E. FORSTER, Director of the Hygienic Institution of the University of Amsterdam, published a paper bearing the above title in the *Centralbl. für Chir. Med.* (copied in *Der Fortschritt*, July 20, No. 24).

Professor Forster, whilst engaged in numerous and diversified investigations, carried on by himself and under his direction, by some students of the above-named institution, especially in his bacteriological experiments, found with convincing evidence that the usual methods and means of cleansing are insufficient for perfectly freeing the hands from adherent schizomycetes (bacteria). This has been proved by the following experiments.

The hands, after having been thoroughly cleansed by means of perfectly clean brushes in soap and water, and washed in pure solution of carbolic and boracic acid, chloride of zinc, sesquichloride of iron, &c., of varying degrees of concentration, were wrapped—in order to protect them against further infection by dust or contact with other objects—in cotton-wool or napkins which had previously been exposed to a temperature of 120°–140° C. (248°–285°·8 F.), as apparently clean towels, which had not been submitted to such high degrees of heat, were invariably found infected by saprophytic fungi. After this, one finger was introduced into a sterilised neutral or weakly alkaline peptonised meat-infusion or into Koch's nutritive gelatine. In these, in every instance without exception, various kinds of schizomycetes appeared after twenty-four to sixty hours, the growth of which could be perceived by their macroscopic behaviour and by microscopic examination. It was especially proved that the method of cleansing usually employed by medical men with a 2½ per cent. solution of carbolic acid, or (on Billroth's recommendation) by hydrochloric acid and 10 per cent. of carbolic acid in glycerine, was inadequate for sterilising the hands. This, however, has been successfully accomplished exclusively by the lately more commonly adopted washing with a solution of half a gramme to a gramme (7½ to 15 grains) of sublimate in 1,000 grammes (35 ounces) of distilled water, after a previous thorough cleansing of the hands with soap and water. In this manner, the hands were so efficiently freed from the fungi which are apt to rapidly develop in peptonised meat-infusions, that the fingers could be safely introduced into, and left in the most sensitive media, without giving rise to any demonstrable growth of fungi. The sensitiveness of the media employed was tested after every experiment.

On the evidence of these experiments, Professor Forster feels justified in pressing his advice, that in every case in which a thorough disinfection of the hands is aimed at, ablution with solution of carbolic acid should be superseded by washing with solution of sublimate, after a preceding careful mechanical cleansing. FERD. ADALB. JUNKER, M.D.

ARTICLE 4650.

REID ON THE RELATION OF THE BRAIN-SURFACE TO THE SCALP.

IN the *Lancet* (September 1884) Dr. R. W. Reid publishes a paper on the relation of the principal fissures and convolutions of the brain to the outer surface of the scalp, and gives two diagrams which will be useful when operative interference has to be resorted to. But they will bear increasing in number upon the same plan. At present only the one side of the head is shown—one diagram indicating the convolutions and the other the fissures. For practical purposes, it would be advisable to have similar diagrams for both sides and for the top view of the head, and it would be of advantage to indicate the usual position of the larger meningeal arteries and the sinuses. No diagram will, of course, ensure the regularity of the arrangement of the convolutions or meet the requirements of all cases, but Dr. Reid has taken an useful step in trying to show by external markings and measurements where to find particular parts of the brain-surface. What has been previously written has generally been confined to the relation of the sulci and convolutions to the outer surface of the bones of the cranium, and especially with reference to the sutures; but frequently these sutures cannot be felt through the scalp, and practically, therefore, such relations are not of sufficient help in examining the head from a medical or a surgical point of view. The plan adopted here is capable of enlargement, but is likely to be of practical use.

We should prefer, however, to see the various areas and convolutions mapped out upon a plaster cast of the head, as more practically serviceable for reference in cases where an operator wished to hit a particular spot, or the teacher wanted to show a class what parts were probably affected by injury or disease. Surface-measurements must always be difficult and unsatisfactory, and would not be anything like as useful to operator or observer as the means just indicated; but there is no doubt the plan followed by Dr. Reid is likely to be a great help, and it is the result evidently of long and careful observations. The advances in cerebral physiology and pathology have of late years been so marked that it is necessary for the physician and the surgeon to be fully aware of the relation of the deep parts to the surface, so as to arrive at a correct diagnosis of many obscure causes of cerebral symptoms, and, still more, to enable the surgeon to remove what may have been diagnosed as a removable cause. For the surgeon, too, as a clinical teacher, this knowledge is most essential, and a good deal remains to be done in simplifying and clearing the landmarks of cerebral anatomy. Such a paper as Dr. Reid's is, therefore, to be welcomed as a step in an important direction.

We have ventured to suggest some extension and modifications of the method adopted, and congratulate the author upon what he has done in this difficult task already. There are some methods of carrying out such observations which appear likely to bear useful results, and these are practicable to a good draughtsman or photographer who is an anatomist. But the simpler methods have to be exhausted as well, and we have here the results of careful direct observation, which must prove of great service in an inquiry which is essentially difficult, and where the materials vary to a considerable extent in the different subjects examined, and even the different sides of the same subject. But these differences are no more than in many other anatomical matters for which we do not hesitate to accept a more or less definite arrangement, and recognise landmarks in the prominences and markings of the surface. W. W. WAGSTAFFE.

ARTICLE 4651.

M'BRIDE ON LARYNGEAL PARALYSES.

IN an interesting study on this subject (*Edinburgh Med. Jour.*, July 1885), Dr. M'Bride discusses first Unilateral Recurrent Paralysis. After referring to Semon's researches, he states that, from his own experience, he is of opinion that in cases of pressure on the recurrent trunk it is more common to find the vocal cord in the middle line than in the cadaveric position; in other words, that paralysis of the abductors is more usual than that of the adductors. Three cases are mentioned in which this phenomenon occurred, although very slight or no symptoms were present pointing to so grave a condition. He, therefore, agrees with Semon that laryngoscopic examination is a duty in all organic diseases (proved or suspected) which may affect the centres or trunks of the motor nerves of the larynx, even when no laryngeal symptoms appear to demand such an examination.

Under the heading of Bilateral Paralysis of the Abductors, the author records an interesting case of this affection due to locomotor ataxia. Only a few similar cases have as yet been described. Mention is made of a case of mediastinal sarcoma in which, according to the author, there was complete paralysis of the right, and paresis of the left abductor; the right cord was immovable in the middle line, the left could be only imperfectly abducted. In view of cases of this description, the author suggests that the routine use of the laryngoscope in thoracic cases might lead to the recognition of a stage of recurrent paralysis, prior to complete loss of abduction in unilateral pressure upon the recurrent nerve. He is further of opinion that, in all cases of suspected thoracic disease, in which pressure on one or other recurrent nerve might occur, the fact that one cord did not, on deep inspiration, move as far outwards as the other, would seem to afford as strong evidence of pressure upon the corresponding inferior laryngeal nerve as either complete immobility in the middle line or in the cadaveric position. The author concludes with the careful description of a rare case of epithelial cancer at the base of the skull, which produced laryngeal and other symptoms by pressure upon the hypoglossal, glosso-pharyngeal, and pneumogastric nerves, together with those fibres of the spinal accessory which are incorporated with the vagus. For particulars of it we must refer to the original.

E. Cresswell Baber, M.B.

Article 4652.

MUNK ON THE TREATMENT OF OBESITY.

Dr. Munk, in the *Berliner Klin. Wochensch.*, March 30, criticises at length some recent methods of reducing obesity. Chambers, in 1850, excluded fat from the food, together with the greater part of the carbohydrates, and he was also the first to limit the supply of liquids. Dancel, in 1863, recommended plenty of albumen, a fair quantity of carbohydrates, and an allowance of between 500 and 1,250 grammes of liquid.

Banting's diet (the name of his medical adviser, Mr. Harvey, should not be forgotten, and in Germany this method of reducing obesity is called the 'Harvey-Banting' method) was almost purely albuminous. The proximate elements taken daily amounted to 170 grammes of dry albumen, 10 grammes of fat, and 80 grammes of carbohydrates. Banting reduced his weight by 35 lbs. in nine months by this diet, and his girth by 12½ English inches. The Banting diet deserves a closer examination. Fat exerts a protective influence over albumen; the greater the fat-supply, and also the fatter the body, the less is the destruction of albumen. In this diet no fat, and very little carbohydrates, is supplied, but plenty of albumen, which therefore partly undergoes destruction, and is partly deposited in the body, while the fat of the body is absorbed and reduced. The patient's condition improves in every way.

But the case alters as the body-fat lessens. With a higher albumen-condition and a lower fat-condition of the body, the conversion of albumen is greater, and more and more albumen is required in the food. Otherwise there is both fat-loss and albumen-loss, and, when the latter occurs, the patients feel very weak. Hence, the Banting *régime* is only suitable for the first few weeks, and both fat and carbohydrates should then be given, so as to restrict the albumen-changes in the body. As regards the protection of albumen, fat and carbohydrates are of about equal value; but, as regards the production of heat and the evolution of force, 1 part of fat = 2·4 parts of carbohydrates. The above diet, then, too rigidly carried out, soon makes the patients (or, at least, most of them) weak and wretched and sleepless; and very often dyspepsia arises, or gastro-intestinal catarrh, from failure to digest the albumen supplied.

Ebstein, therefore, arranged a different diet,[*] in which there was more fat and less meat, and still less carbohydrates than in the Banting diet. This diet represents 100 grammes of dry albumen, 85 grammes of fat, and 50 grammes of carbohydrates, with about 1,750 grammes of liquid (!), and is far more non-nitrogenous than Banting's, and consequently there is less destruction of albumen in the body. Fat allays hunger sooner than other foods, and also the addition of fat to the food gives more variety.

No doubt there is reduction of fat by this method, but it is doubtful if the albumen condition be more than preserved at its former level; it can hardly be raised if the fat is to be reduced at the same time. As Voit insists, less non-nitrogenous food must be given than the body requires to keep up its fat condition. Now a healthy man doing little work requires daily about 130 grammes of albumen, 90 grammes of fat, and 360 grammes of carbohydrates. In Ebstein's diet, it will be seen that less albumen is supplied than is required in health, and this is not advantageous, considering that the deposition of albumen in the body is wanted. The body loses fat then by Ebstein's method, but less than by the Harvey-Banting method, and this gradual manner constitutes its merit over the latter method, and its only merit. For if Ebstein, supporting himself on Voit's experiments, asserts that when fat is given it does not cause deposition of fat, while carbohydrates favour deposition of fat from the non-nitrogenous products of the decomposition of albumen, such explanations rest on a misunderstanding of Voit's later experiments. Ebstein derives fat entirely from albumen, *i.e.* from the non-nitrogenous elements after the splitting up of albumen; but its derivation from the fat of the food has been conclusively shown (Hofmann, Lebedeff, Munk), and its ultimate formation from excess of carbohydrates has been already proved in herbivora and in birds. The above diet thus affords as much fat as is required to keep up the fat-condition in health; but, as reduction of fat is here wanted, it would be better to give more carbohydrates and less fat. [Oertel declares that Ebstein's diet is as likely to cause disgust as Banting's. The former has too much fat, the latter too much albumen.—*Rep.*]

Lastly, Oertel's work has appeared, a most meritorious one. Besides the rational regulation of the diet, Oertel keeps also in view the bad consequences of obesity upon the heart, the circulation, and the blood, and for the last ten years he has obtained brilliant and constant results by his method, which is experimentally founded in every particular.[*] The patients are divided into two classes, according as the vascular apparatus is intact or not; a good supply of albumen is given, and a fair quantity of fat and carbohydrates.

Amongst the organs to be deprived of fat, the heart-muscle requires the greatest attention, because it does not gain in power as fast as it loses fat. The more thorough the reduction of fat, the greater is the danger of atrophy and cardiac debility, with baneful consequences as regards the circulation—viz., lessened arterial fulness and tension, venous stasis, and dropsy. On the one hand, therefore, the supply of liquids is greatly restricted; on the other, the excretion of water from the skin and lungs is greatly increased; thus the work of the heart is lessened by diminishing the volume of the blood. The same means which effect this increased excretion of water—viz., mountain-climbing, also form a gymnastic for the heart-muscle. When mountain-climbing cannot be done, recourse is had to Turkish baths, vapour-baths, injections of pilocarpine, or simple exercise.

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[*] W. Ebstein, *Die Fettleibigkeit und ihre Behandlung*, Wiesbaden, 1882.

[*] Oertel, *Therapie der Kreislaufs-störungen.* Munich, 1884. An English translation of this is in the press.

Even if the heart be unimpaired in its action, the restriction of liquids is still good, because the extra amount of albumen requires a plentiful amount of pepsine in the gastric juices, and liquids dilute it and spoil its action. E. J. Edwardes, M.D.

Article 4653.

BRUNTON AND PYE-SMITH ON THE PATHOLOGY AND TREATMENT OF CHOLERA.

Drs. T. Lauder Brunton and P. H. Pye-Smith have contributed a series of most valuable papers on the above subject in the *Practitioner*, beginning October 1884, p. 352, and ending in June 1885. To attempt an analysis of them is simply impossible, as they must be studied in their entirety, although the authors' summary, given almost in their own words, will convey a very clear idea of the results of their investigations. To sum up, then, we may say, regarding the pathology of cholera, that it is probably an infectious disease which is caused, like anthrax and other infectious diseases, by an organism. What the exact nature of this organism is has not yet certainly been proven, whether it be Koch's comma-bacillus or some other.

Cholera differs from other infectious diseases in the fact that in it the pathogenic organisms, if such there be, appear to be confined to the intestinal canal, and not to be distributed, as in other infective diseases—*e.g.* anthrax—through the blood and tissues of the body generally.

The symptoms appear to be chiefly due to the action on the mesenteric ganglia and vascular system of a chemical poison produced by the pathogenic organisms, either within their own substance, or by the decomposition of albuminous or other inorganic substances in the intestine. And here it may be well to note that many observations point to the fact that meteorological conditions, especially peculiar electrical conditions of the atmosphere, greatly modify the course of the disease. At first sight, it might appear that this fact was in opposition to the idea that symptoms of cholera are due to the formation of a chemical poison by the agency of bacteria. A little consideration will show, however, that this is not the case; for we know that electrical conditions, such as a thunderstorm, will cause milk to become sour, although the formation of acid in the milk is due to the bacterium lactis.

Certain atmospheric conditions accelerate the formation of acid by this bacterium in the milk, so much so, that the milk becomes sour in a short time, although ordinarily it might stand for a considerable time without undergoing any such change. Mr. Watson Cheyne informs us that, when the milk has previously been sterilised, it does not become sour during a thunderstorm. The rapid formation of acid is most probably due to an alteration in the vital activity of the bacteria from altered electrical conditions, and not necessarily to their falling into the milk in greater numbers, as Dr. Lodge has suggested. In the case of the pathogenic organisms of cholera, we can readily imagine that the same would be the case; for there is no reason why altered electrical conditions should not affect them as much in the intestine as they do the bacterium lactis in a milk-pan. It is possible that the electrical condition may also modify those ingredients of the milk from which acid is formed, and those albuminous or other substances in the intestine from which the cholera-poison is produced, as well as the processes of secretion and absorption in the individual attacked by the disease.

In all probability, the absorptive power of the intestine will modify the disease. Lewis and Cunningham have noticed that, when they injected noxious fluids into the blood, the ileum for a distance of one or two feet above the ileo-cæcal valve remained surprisingly free from the congestion and disorganisation of the mucous membrane, with which the other parts of the small intestine were affected. The very portion which escaped injury in these experiments was the one which they found to show the most marked tendency to congestion in cases of cholera. They tried in vain to reconcile the phenomenon with any known anatomical peculiarities of this part of the gut. Since their paper was published, a curious physiological peculiarity of this part of the intestine has been discovered by Tappeiner, who injected the biliary salts, cholate of soda, glycocholate of soda, and taurocholate of soda, into the intestines, and found that in the duodenum water only was absorbed, but none of the biliary salts. In the jejunum, glycocholate of soda was very readily absorbed, but the others were not. In the ileum all three were absorbed. The part of the intestine which Lewis and Cunningham found to be most affected in cholera, where the poison is absorbed from the intestine, is that where the absorption of biliary salts occurs most readily.

We must now pass on to the last part of our subject—viz., a consideration of the treatment of cholera.

To give a list of all the remedies which have been used in cholera, would be nearly to run through the Materia Medica. They may, however, be divided into five classes.

The first three classes contain remedies which will act in the intestinal canal.

1. Those which are likely to have an antiseptic action in the intestine by destroying any organisms there present.

2. Those which will tend to remove the cholera poison, whether it consist of living organisms or of some chemical substance.

3. The third class consists of those remedies which will counteract the effect of the poison upon the intestinal canal. These may be given either by themselves, or along with remedies belonging to one of the other classes.

The next two classes of remedies are intended to deal with the poison after it has been absorbed into the general circulation.

4. The fourth class contains remedies which will tend to eliminate the poison from the system.

5. The fifth, those which will counteract its effects.

Among the first class calomel holds an important position; and its action is a double one, increasing the quantity of bile poured into the intestine, and bile is an antiseptic as well as calomel itself. The antiseptic action of mercury exists in still greater activity in corrosive sublimate, a drug highly extolled by Grant Bey, who gave one-tenth to one-eighth of a grain every quarter, every half, or every hour, according to the condition of the patient. The authors shortly review all the other classes without contributing anything novel, and conclude by stating their views as to the direction in which further researches after a remedy for cholera are most likely to prove successful. These are—1. The discovery of an antiseptic which will destroy pathogenic organisms in the intestine and prevent the formation of the cholera-poison, while it is not itself poisonous. Corrosive sublimate is a sufficiently powerful antiseptic, but it may itself prove poisonous to the patient as well as to the pathogenic organisms. It is possible that, amongst the members of the aromatic group of bodies, a substance may be found having the desired properties. 2. The discovery of some substance which will antagonise the action of the cholera-poison after its absorption. As a preliminary step in this direction, further experiments are needed on the nature and action of alkaloid substances obtained from cholera dejecta, as well as from artificial cultivations in various media, and under various conditions, electrical and otherwise. 3. Observations on the effect of stimulation of the mesenteric plexus by currents passed through the uninjured abdomen in poisoned animals, and in patients suffering from the disease.

Richard Neale, M.D.

Article 4654.

WOOD ON HERNIA.

The exhaustive lectures delivered before the College of Surgeons by Mr. John Wood upon 'Hernia and its Radical Cure' are published in detail in the *British Medical Journal*, where, at p. 1281, June 1885, may be found a summary of Mr. Wood's views and statements. These are here reproduced at some length; but all should study the lectures for themselves.

Scarcely any subject, says Mr. Wood, has been more discussed or more written about in the whole department of surgery than that of attempting the radical cure of hernia. Not any has been more soiled by the practices of mountebanks and charlatans, from the earliest dawn of the history of medicine. The want of permanent success has been almost universal, and life has been too frequently sacrificed. Celsus practised excision of the sac and its covering, together with, in many cases, the testicle. Galen and Paulus Ægineta ligatured the sac at the superficial ring, tying up also the cord and skin. Later on the sac was opened freely, and its edges stitched together. This was called the 'royal stitch,' because it qualified for military service. Ambroise Paré adopted the 'punctum aureum,' which consisted in passing a golden or leaden wire behind both sac and cord, at the superficial ring, and twisting it down tight, without stopping the circulation through the testicle. The sac was thus exposed by a free incision, and ligatured without enclosing the cord, a procedure that has caused great fatality and has been long since abandoned. Then came the use of trusses of all kinds and shapes, successful in a few cases in curing radically, and free from the risk of dangerous complications, but still far from satisfactory in their ultimate results. Then injections were tried within the sac and outside the sac, with variable success. Wützer and others used plugs to invaginate the skin of the scrotum into the canal, but in all these methods it was found that relapse was generally the result.

Since 1863, various other methods have been adopted. Spanton screws the pillars together with a corkscrew apparatus, removed after a week or more. Fitzgerald laces up the pillars of the superficial ring with a continuous gold-wire suture, left *in situ*. Dowell sews subcutaneously the pillars of the ring with silver wire, and claims sixty cures out of one hundred cases.

In all the preceding modes of operating, only the anterior wall of the inguinal canal and its superficial ring are involved, the hinder wall and deep ring, together with the neck of the sac, being untouched. The result is that, sooner or later, the hernia makes its way behind the adhesions or the permanent wire sutures, separating the former, and by constant pressure causing the latter to cut its way slowly through the tissues and become useless. A similar result will undoubtedly occur if Mr. Wood's operation be imperfectly performed, and the pillars of the superficial ring only be sutured, a misapprehension that may readily occur from faulty anatomy. The want of success, often due to the operator, and not to the operation which goes by Mr. Wood's name, has led to the 'open method' adopted by such men as Lister, Annandale, Stokes, Sir W. Mac Cormac, and others. In this operation the canal is opened, the neck of the sac hid and either removed or not, and the sides of the wound are carefully stitched together. To remove the sac entirely is a tedious, severe, and often a difficult operation, and requires much care; it is described by Banks as 'mauling,' and by Stokes as 'unsurgical, repulsive, and barbarous.'

Mr. Wood concludes that the operation for radical cure of hernia is a justifiable and reliable operation, giving great relief and exemption from the minor troubles and worry that help to make life miserable. In 1879, according to the returns, there were 1,119 deaths from hernia, of which nearly 24 per cent. had undergone operations for strangulation. The average mortality after kelotomy is 42 per cent. The importance of a permanent cure effected during youth for so large and useful a class, when thus viewed, rises to a national demand. Mr. Wood, in the course of his lectures, showed cases of twenty-three years' duration and downwards, where the hernia had been radically cured.

Richard Neale, M.D.

Article 4655.

CAMPBELL ON THE TREATMENT OF MANIACAL EXCITEMENT.

In the *Lancet*, Aug. 1885, p. 240, Dr. J. A. Campbell contributes some remarks on the treatment of maniacal excitement. The author divides these cases into eight classes, and gives his experience in the treatment of each class.

The *first* class considered is the insanity of masturbation. These patients require careful feeding, the use of blood-restorers, out-door exercise, sleeping under supervision, in some case circumcision, the morning shower-bath; and, if a sedative be required, bromide of potassium is the best. A large proportion of this class adhere to their habits, drift into dementia, and die of phthisis.

The *second* class includes cases of puerperal mania. By careful feeding, tonic treatment, and attention to general health, with out-door exercise whenever the patient can bear it, the excitement soon disappears, and the great majority of cases recover. The author states that he has never seen a patient die during an attack of puerperal mania, except from previously existing disease, or an acute disease occurring during the course of the attack.

The *third* class includes cases of acute mania, in which the stage of excitement lasts some days. The safest, quickest, and most effective means of promoting recovery is persistent muscular action in the open air, combined with careful feeding. Sedatives and sleep-producers are only needed in the worst cases.

In the *fourth* class the author places cases of insanity from drink. These are soon cured by giving a good purgative, plenty of liquid food, copious libations of cold water, and a few days spent in the open air.

The *fifth* class includes cases of periodic mania which run a given course, where excitement gradually increases until it reaches a climax and then gradually subsides. For these cases, thorough continuous out-door exercise is the proper treatment, combined with a light diet of milk, vegetables, and farinaceous food.

The *sixth* class contains the cases of epileptic insanity; and the well proved method of treatment with continual doses of bromide of potassium, is the best for reducing the number and severity of the fits, and can be continued for years without causing any deterioration of the blood. The author, however, has noticed that epileptics who have been long under this treatment are liable to have congestion of the bases and posterior portions of their lungs, but this condition seldom passes further than congestion. After a succession of fits, epileptics should be allowed to lie in bed, and during the period of epileptic excitement no sentimental opinion should prevent their seclusion. The excitement in epileptic insanity differs from that in other forms; it is more easily acted on by outward causes, it subsides more quickly in solitude, and its characters render it more dangerous to the sufferer and those around him.

The *seventh* class includes patients suffering from general paralysis. These are the most difficult to deal with; they are apt to run great dangers during the excitement stage, and must be kept quiet by sedatives. In this class, the fatal issue of the cases makes the author feel less compunction in keeping the patient under the influence of drugs. When the patient becomes too ill to walk, he should be kept in bed; and the author does not consider it good to support the patient in wonderfully constructed chairs, &c.; the only thing to be insisted upon is perfect cleanliness, by which means bed-sores are best avoided.

The *eighth* class includes the senile insane, and the treatment of these cases is summed up as follows:—nursing, feeding, warmth, the judicious use of malt and spirituous liquids, with an occasional hypnotic. The author recommends chloral wine.

The remarks conclude by a short note on the great natural remedy we possess in treating these cases by out-door exercise, and a word or two upon sedatives. The author believes that most sleep-producers given at night for any length of time produce an irritable mental state, and frequently stomachic discomfort, but that even extreme treatment by bromide of potassium, if it stop short of poisoning, gives rise to no permanent bad effect, physical or mental.

RICHARD NEALE, M.D.

SURGERY.

RECENT PAPERS.

4656. TERRILLON. Perforating Ulcer of the Hand. (*Lancet*, April, p. 676.)

4657. DESPRÈS. A Foreign Body in the Breast. (*Gaz. des Hôpitaux*, Dec. 11, 1884.)

4658. HUMPHREYS. Rapid Recovery after Compound Depressed Fracture of the Skull, with loss of Brain-Substance. (*Lancet*, August, p. 243.)

4659. STEEVES. Dislocation of the Metacarpal Bone of the Thumb. (*Brit. Med. Jour.*, August, p. 295.)

4660. CROFT. The Early Treatment of Hip-joint Disease. (*Brit. Med. Jour.*, June, p. 1163.)

4661. PICK. Subcutaneous Diseases of the Sphincter Ani. (*Med. Times and Gazette*, June, p. 739.)

4662. SMITH, NOBLE. Digital Tenotomy in Pianists. (*Brit. Med. Jour.*, July, p. 15.)

4663. DAVY. Spinal Caries. (*Brit. Med. Jour.*, July, p. 8.)

4664. KINGSBURY. Cucaine in Operation for Fistula in Ano. (*Brit. Med. Jour.*, August, p. 234.)

4665. PRICE.—The Use of Cucaine in the Removal of Epithelioma of the Lip. (*Brit. Med. Jour.*, August, p. 396.)

4666. MURPHY. A Case in which a Patient Removed Forty-three Calculi from his own Bladder. (*Brit. Med. Jour.*, August, p. 249.)

4667. BERRY. A Case of Fracture of the Larynx. (*Lancet*, May, p. 936.)

4668. CANE. The Prevention of Piles. (*Lancet*, July, p. 98.)

4669. NAISMITH.—Abdominal Pain as a Symptom in Slow Intrapericardial Hæmorrhage. (*Lancet*, July, p. 59.)

4670. GROSS.—On Nephrectomy. (*American Jour. of Med. Sciences*, July 1885.)

4671. LAGRANGE.—Gastrostomy in Cancer of the Œsophagus. (*Revue de Chirurgie*, 1885, No. 7.)

4672. PETERSEN, OSCAR V.—On Transplantation of the Frog's Skin to Granulating Wounds in Man. (*Vratch*, No. 33, 1885, p. 451–2.)

ART. 4656. *Terrillon on a Case of Perforating Ulcer of the Hand.*—In the *Lancet*, April 1885, p. 676, is mentioned a case of perforating ulcer of the palm of the hand, described by M. Terrillon. The ulcer was situate at the junction of the ring finger with the palm. The patient was suffering from tabes dorsalis, in which disease there seems no reason why the hand should not be affected in a similar manner to the foot. M. Nicaise thought the ulcer was merely a corn which had become fissured, as the epidermis and cutis were thickened, whereas in perforating ulcers the cutis is thinned and even perforated; but M. Charcot did not hesitate to regard the ulcer as of dystrophic origin.

4657. *Desprès on a Foreign Body in the Breast.*—In the *Gazette des Hôpitaux*, Dec. 11, 1884, M. Desprès relates the case of a young woman who was under treatment for mammary abscess which was opened, but did not progress favourably. Some days afterwards, while examining the patient, he drew out a fragment of clothing, and, pressing on the breast, he forced out two fragments of matches. The patient then remembered that she was struck on the breast, and fell down, having at the time three or four matches in her hand.

4658. *Humphreys on Rapid Recovery after Compound Depressed Fracture of the Skull with loss of Brain-Substance.*—In the *Lancet*, Aug. 1885, p. 243, Mr. Humphreys records the following case, remarkable for its rapid recovery. A lad, ten years old, was kicked on his head by a pony. On examination there was found a laceration of the scalp immediately behind the right parietal eminence, and a depressed fracture of the skull. The depression consisted of several fragments of bone firmly locked together; its shape was nearly circular, and about two inches across. From the wound about a teaspoonful of brain substance escaped. When first seen, the patient was completely unconscious, but on examination of the wound he became restless. He lay in an attitude of general flexion, and there was no evidence of paralysis corresponding to the seat of injury; the sphincters acted normally. In the absence of symptoms, the wound was not interfered with; the head was shaved, and covered constantly with cold water dressings. An aperient was given, and calomel administered in small and frequent doses. During the next forty-eight hours the temperature remained normal, and the boy showed slight signs of consciousness at times, taking food when put to the lips. On the third evening the temperature rose to 101°·5, and he was very restless. Bromide of potassium was given. The next morning the temperature was normal, and on the fifth day after the accident the boy was sitting up in bed playing with his toys, and having no recollection of the accident. The wound rapidly healed by granulation. Five months after the accident, he was as well and as bright as ever. There was a large depression on the right side of the head, equal to the bowl of a dessert-spoon.

4659. *Steeves on Dislocation of the Metacarpal Bone of the Thumb.*—In the *Brit. Med. Jour.*, August 1885, p. 295, Dr. G. W. Steeves records a case of dislocation of the metacarpal bone of the thumb. A young man, aged 22, was suddenly thrown over the handles of his bicycle whilst riding at great speed, and fell on his right hand. In addition to other injuries, it was found that the carpal end of the metacarpal bone of the right thumb was dislocated backwards, producing a well-marked prominence, over which the skin was tightly stretched. After considerable extension and pressure (without anæsthesia), the dislocation was reduced. A well-padded wooden splint was then applied to the palmar surface, extending upwards beyond the wrist, and a stout pad was placed over the seat of the recent dislocation. The splint was kept on for a week, and bandages for a month. Six weeks after the accident, the patient had free use of the joint. Similar cases are reported at pages 250 and 366.

4660. *Croft on the Early Treatment of Hip-joint Disease.*—In the *Brit. Med. Jour.*, June 1885, p. 1143, Mr. J. Croft contributes an article on the early treatment of chronic arthritis of the hip-joint. The author divides cases of this affection occurring in children into three kinds: 1, simple; 2, strumous; 3, tuberculous. Next he comments upon: 1, the frequent tubercular nature of this chronic disease; 2, the frequency of the occurrence of necrosis and sequestra in the later stages; 3, the less frequent shortening of the limb, found in cures during the first stage of the disease; and 4, the too much overlooked symptom of reflex spasm and rigidity. The most important point on which the author insists with regard to treatment, is absolute rest in the earliest stage, combined with pure air and sea-side residence. The plan of using passive movements is a most injurious one in cases of strumous and tubercular forms of the disease. Absolute rest is necessary, in order to prevent the occurrence of necrosis. The patient should remain in a recumbent position, with a well-fitting suitable long splint applied to the limb, accompanied with a certain amount of extension, just sufficient to keep the limb straight, and to prevent shortening. The use of irritants, setons, issues, &c., is not recommended, but much benefit is derived from leeching, in relieving acute sensitiveness and pain in acute attacks of inflammation. The splint used by Mr. Croft is made by Spratt, of Bond Street, who supplies a double splint for 10*s.* 6*d.*, and a single one at half the cost.

4661. *Pick on Subcutaneous Division of the Sphincter Ani.*—In the *Med. Times and Gazette*, June 1885, p. 739, Mr. Pick recommends the plan of dividing the fibres of the sphincter ani by a subcutaneous incision, in cases of spasm of the rectum and fistula in ano. The author records the case of a man who suffered from intense pain and spasmodic contraction of the sphincter ani after each action of the bowels. No structural lesion could be detected, and it was determined to divide the sphincter subcutaneously. This was done by inserting the left forefinger into the rectum, and then introducing a tenotome through the skin about a quarter of an inch from the anal orifice; by means of the finger in the rectum the point of the tenotome was carried up beneath the mucous membrane, until it was well above the upper edge of the sphincter muscle. The tenotome was then turned round, and the fibres of the muscle were divided until no resistance remained. After the operation, the patient's bowels were confined for 48 hours by means of opium; then a copious enema was given, producing a good evacuation without any pain. From this time, the patient was perfectly relieved of his trouble. The author also records three cases in which he has divided the fibres of the sphincter ani in this manner before operating for piles, and considers this a better plan than that of forcibly stretching the sphincter with the hand.

4662. *Smith on Digital Tenotomy in Pianists.*—In the *Brit. Med. Jour.*, July 1885, p. 15, Mr. Noble Smith describes the operation of digital tenotomy as practised by Dr. Forbes, of Philadelphia. The author has made several dissections upon the dead body, with a view to determine the usual position of the slips of tendon which limit the action of the extensor of the ring finger, and has found them to vary very much; it is necessary to carefully determine their position by the eye and finger, during movement of the extensor-tendon in each case, before operation. Mr. Smith has succeeded in freeing the ring-finger of the right hand of an accomplished lady pianist, without causing more pain than is felt from the prick of a pin.

4663. *Davy on Spinal Caries.*—In the *Brit. Med. Jour.*, July 1885, p. 8, Mr. Richard Davy contributes a lecture on spinal caries, and on improvements in its treatment. The author describes the method by which he always puts up his patients in plaster-of-Paris jackets. The apparatus consists of a hammock made of a long piece of towelling; the patient is suspended in the hammock, and the plaster bandages are applied over the hammock, which is withdrawn when the bandages are dry. In cases of spinal caries complicated with abscess, it is always best to postpone opening the sac (whatever its contents may be) until pointing is so pronounced as to necessitate an outlet; to interfere surgically in these chronic abscess-cavities is often a mistake, as these fluid collections sometimes solidify or become absorbed. But in cases where necrosed bone exists, then a dependent opening must be made, and the sequestra removed as soon as possible. The author relates the case of a girl, aged 19, who had been under his care for six years. In 1882 it was found necessary to open a large psoas abscess on the right side, from which sixty ounces of pus were drawn off. Within three months the patient was discharged, with a well adjusted spinal jacket. A curious clinical fact was noted in this girl's case. At 2½ years old she had an abscess on the left side of the neck; this was opened, and a scar resulted, situated one inch above the left clavicle, and one inch and a half from the anterior border of the left sterno-mastoid tendon. The result of this scar on the sympathetic nerves of the neck caused permanent contraction of the left pupil.

4664. *Kingsbury on Cucaine in Operations for Fistula in Ano.*—In the *Brit. Med. Jour.*, August 1885, p. 234, Dr. Kingsbury writes that he used cucaine with great success in the case of a lady on whom he had to operate for fistula in ano. By means of an ordinary hypodermic syringe, he injected along the fistulous track 10 minims of a 4 per cent. solution of cucaine, and in less than a quarter of an hour he was able to divide the tissues between the fistula and the bowel without causing the patient any pain. [In the *Lancet*, June 1885, p. 1,033, Mr. Barford reports a case where the cucaine proved most effectual.—*Rep.*]

4665. *Price on the Use of Cucaine in the Removal of Epithelioma of the Lip.*—In the *Brit. Med. Jour.*, August 1885, p. 396, Dr. J. A. P. Price records a case in which he removed a small epitheliomatous growth from the lip of a man aged 60. The author injected about one-sixth of a grain of cucaine into the substance of the lip, and painted the mucous membrane in the neighbourhood of the sore with a 5 per cent. solution of the drug. After waiting about six minutes the growth was quickly removed and sutures inserted. The patient stated that he felt the skin being cut and the needles inserted, but the pain was not very sharp. Half an hour after the completion of the operation the patient complained of a burning sensation in the wound, thus showing that the effect of the drug was passing away.

4666. *Murphy on a Case in which a Patient Removed Forty-Three Calculi from his Bladder.*—In the *Brit. Med. Jour.*, August 1885, p. 249, Dr. James Murphy gives an account of a case in which a patient removed forty-three calculi from his own bladder by a novel method. The patient was an architect, and possessed mechanical genius. When told that there was a stone in his bladder, and an operation was necessary, he declined to submit, and at once set to work thinking how he could extract the stone. After several fruitless attempts, he devised a form of aspirator as follows. He purchased a large ear-syringe, to which he fitted a No. 10 catheter, from which he had removed the end as far as the eyelet. While the bladder was full he got on to his knees, rolled the stone about till he considered he had it at the entrance to the urethra, then gently passed his catheter with syringe attached, till he struck the stone; then, without displacing the stone, he gently withdrew his catheter about an inch, and rapidly pulled out the piston; after some failures he succeeded in bringing the stone into the urethra, when, by means of straining at first, and afterwards, when it came within reach of his fingers, by external manipulation, he had the satisfaction of at last getting the stone into his hand. His troubles did not end here; he found that he had more calculi left in his bladder, and from time to time during the next three years he was obliged to resort to the same procedure, and removed in all forty-three calculi. At length he decided to diet himself, avoiding alcohol and saccharine fatty matters, and for two years he has not been troubled by any more calculi.

4667. *Berry on a Case of Fracture of the Larynx.*—In the *Lancet*, May 1885, p. 936, Dr. Berry records a peculiar case of fracture of the larynx occurring in a man, aged 21, who was working at a circular saw, when he was suddenly struck in the throat with great force by a large piece of wood coming from below upwards. The patient was conveyed to his home 500 yards distant, and put to bed with his head and shoulders raised, whilst warm fomentations were applied to the throat. Dr. Berry examined the case, and diagnosed a fracture of the larynx, the wings of the thyroid cartilage being separated. The patient being fairly comfortable, it was decided to leave him alone, giving only ice by the mouth. At 1.30 A.M. the next morning, however, urgent dyspnœa came on; when Dr. Berry arrived, he found him unconscious, and at once performed laryngotomy, but no air entered the lungs, and death soon took place The condition of the parts was examined through the operation-wound; it was found that, besides the separation of the wings of the thyroid, there were oblique lines of fracture through the wings themselves. Within easy reach of the finger, hanging down the trachea by a mere shred of fibrous tissue, was a part of the left wing of the thyroid cartilage which had most likely acted as a valve and prevented inspiration.

4668. *Cane on the Prevention of Piles.*—In the *Lancet*, July 1885, p. 98, Mr. Cane writes that, amongst the predisposing causes of hæmorrhoids, he considers sitting too long in the water-closet exposed to cold to be one of the most common. Patients with piles will sometimes complain that they suffer more after stool on cold days than on warm days and it is a good plan to advise them to fill the closet pan with warm water before using it. This generally produces great relief. It is suggested that all closets should be made so that hot or cold water can be turned into the receptacle at pleasure, especially in hospitals, where the patients often have to run the risk of increasing their tendency not only to hæmorrhoids, but also to general congestion.

4669. *Naismith on Abdominal Pain as a Symptom in Slow Intrapericardial Hæmorrhage.*—In the *Lancet*, July 1885, p. 59, Dr. Naismith records three cases of slow intrapericardial hæmorrhage, in which it was noticed that the most prominent symptom complained of by the patient was pain in the 'belly.' The most interesting case was that of a labourer aged 45, who received a severe blow on the front of the chest. The man walked home afterwards, feeling a sense of weight and slight pain in his chest. He went to bed as usual, but in an hour or so complained of pain in his 'belly,' and asked for some opening medicine. A medical man was sent for, who prescribed an aperient, along with poultices to be applied over the painful region. Eight hours afterwards, he was dead. On *post mortem* examination it was found that the pericardium was full of blood and clots, and there was a rupture in the form of a fine slit, a quarter of an inch in length, and longitudinal in direction, situated centrally on the posterior aspect of the right auricle. This case is also interesting on account of the rareness of rupture of the right auricle from violence, it generally being the left ventricle that suffers spontaneous rupture; and also on account of the long period that intervened between the accident and the onset of urgent symptoms. RICHARD NEALE, M.D.

4670. *Gross on Nephrectomy.*—In an article on the indications and contra-indications of nephrectomy (*American Jour. of Med. Sciences*, July 1885), Professor Samuel Gross, of Philadelphia, states that of 233 cases of extirpation of the kidney which he has collated from public and private sources of information, 129 recovered, and 104, or 44·63 per cent., died. Of the entire number, 111 by the lumbar incision indicate 70 survivals and 41 deaths, the mortality being 36·93 per cent., while of 120 by the ventral incision 59 recovered, and 61, or 50·83 per cent., perished. On an analysis of these cases, it is found that peritonitis, septic peritonitis, pulmonary embolism, primary hæmorrhage, and uræmia are more common causes of death after abdominal than after lumbar nephrectomy; whilst, on the other hand, shock, exhaustion, septicæmia, pyæmia, anuria, secondary hæmorrhage, suppuration, convulsions, and vomiting are more frequent causes of death after the lumbar method. In other words, Professor Gross states, by the selection of this operation, the risks of peritonitis are reduced to a minimum; septic peritonitis is unheard of, as are also pulmonary embolism and primary hæmorrhage, which were the causes of upwards of six-tenths of the deaths after abdominal nephrectomy. The author, who has been long convinced that the kidney has been too frequently removed, undertakes in this article a consideration of nephrectomy in connection with the various diseases or lesions for which it has been performed, and a comparison of this operation with other modes of treatment. From a careful analysis of all the facts pertaining to the surgery of the kidney, contained in his paper, based as it is upon a study of nearly 450 cases of different operations, he believes that he is justified in formulating the following propositions. 1. Lumbar nephrectomy is a safer operation than abdominal nephrectomy. 2. Primary extirpation of the kidney is indicated, first, in sarcoma of adult subjects; secondly, in benign neoplasms at any age; thirdly, in the early stage of tubercular disease; fourthly, in rupture of the ureter; and, lastly, in uretal fistula. 3. Nephrectomy should not be resorted to until after the failure of other measures; first, in subcutaneous laceration of the kidney; secondly, in protrusion of the kidney through a wound in the loin; thirdly, in recent wounds of the kidney, or of the ureter inflated in the performance of ovariotomy, hysterectomy, or other operations; fourthly,' in suppurative lesions; fifthly, in hydronephrosis and cysts; sixthly, in calculus of an otherwise healthy kidney; and, finally, in painful floating kidney. 4. Nephrectomy is absolutely contra-indicated—first, in sarcoma of children; secondly, in carcinoma at any age, unless, perhaps, the disease can be diagnosed and removed at an early stage; and, thirdly, in the advanced period of tubercular disease.

4671. *Lagrange on Gastrostomy in Cancer of the Œsophagus.*—In an original memoir (*Revue de Chirurgie*, 1885, No. 7), Dr. F. Lagrange argues that, as a general rule, gastrostomy ought to be excluded from the treatment of cancer of the œsophagus. The surgeon, in dealing with cases of this kind, is placed, it is held, in the following dilemma: either the disease is not far advanced, and then the operation is useless, because the patient can be nourished without the performance of gastrostomy; or the disease has lasted for some time, and then the operation is useless, because the patient must soon die. In cases in which death soon follows gastrostomy, the patient, as was pointed out by L. H. Petit, usually succumbs to the primary affection, and not to any primary or secondary bad result of the operation. Lagrange states that, when cancerous disease of the œsophagus has completely obstructed the passage of food, it has already involved neighbouring viscera. A study of the instances of gastrostomy for cancer of the œsophagus will show that the patient rarely survived for some months after the operation; that very often it shortened his days; and that in other cases not any good was done. The average length of survival after gastrostromy in such cases is, M. Lagrange calculates, about nineteen days. The surgeons who have been the most successful in the operation are those who have performed it at an early stage of the disease, and have postponed opening the stomach until the formation of adhesions. The subject of cancer of the œsophagus, however, may count as a rule on living at least twelve months after the commencement of the disease; so, according to Lagrange, he gains very little by running the risk of an operation which must always be attended with some danger, notwithstanding the facility with which it may be performed, and the recent improvements in abdominal surgery. Complete obstruction of the cancerous œsophagus, it is stated, is often a result of repeated use of a bougie or tube. Whilst allowing that gastrostomy might be reserved for some very special cases, the author holds that extensive visceral deposits will have already occurred in most of the instances of œsophageal cancer in which the patient, though unable to swallow even fluid nourishment, might seem strong enough to tolerate and to derive benefit from the operation. In non-malignant forms of œsophageal obstruction, on the other hand, the operation, it is asserted, is an excellent one, and constitutes a very valuable resource. At the conclusion of this memoir, a list is given of twenty-five cases of gastrostomy for cancer of the œsophagus, completing and continuing the statistical table published by Blum in 1883. W. JOHNSON SMITH.

4672. *Petersen on Skin-grafts from the Frog.*—The perusal of the article of Dr. William Allen, of Leadgate (*see* the LONDON MEDICAL RECORD, Jan. 1885, p. 17), induced Dr. Oscar V. Petersen, of the Alexandrovsky Hospital in St. Petersburg, to try (*Vratch*, No. 33, 1885, p. 571) the transplantation of the frog's skin in a case of a shoemaker, aged 35, in whom there was present a large (9 by 7 centimètres), extremely indolent granulating wound at the neck, which had remained after an operative treatment of carbuncle. The grafts were prepared, and applied in the following manner. After carefully washing the abdominal or spinal skin in a large frog (*rana temporaria*) with a 2 per cent. solution of boracic acid, the author lifted the skin with a pair of forceps, removed with scissors one or two bits about the size of a little finger's nail, spread the bits on a piece of glazed paper (the external surface of the skin being in contact with the paper), then applied them, together with the paper, to the wound (which had been previously washed with a solution of corrosive sublimate), and, finally, fixed by means of adhesive plaister. The paper was used to prevent the plaister from sticking to the grafts. Eleven grafts from three frogs were transplanted in six sittings in the course of five weeks. The results were admirable; all the grafts were invariably found firmly adherent two days after their transplantation, and a few days later they were seen sending finger-like processes towards the edges of the wound. Cicatrisation, which had been previously at a standstill, now went on rapidly, and, a week after the last grafting, the wound healed, the scar being smooth and elastic. Pigmentation of the fresh grafts gradually, but still pretty rapidly, disappeared; the pieces became greyish, and finally quite undistinguishable from the surrounding tissues. Dr. Petersen suggests also a trial of the transplantation of the skin from tritons and so-called 'hairless American dogs.' V. Idelson, M.D.

MEDICINE.

RECENT PAPERS.

4673. Gason.—Two Cases of Intermittent Pneumonia. (*Med. Times and Gazette*, June, p. 741.)

4674. Buck. — Recovery from Malignant Pustule. (*Brit. Med. Jour.*, July, p. 15.)

4675. Knox.—Three Cases of Sunstroke treated with Quinine and the Douche. (*Lancet*, July, p. 153.)

4676. Oliver.—Perforating Ulcer of the Bladder. (*Med. Times and Gazette*, July, p. 77.)

4677. Sturges.—A Case of Latent Pericarditis and Sudden Death. (*Lancet*, July, p. 153.)

4678. Drummond.—The Importance of Early Paracentesis in the Treatment of Ascites. (*Practitioner*, July.)

4679. Sargent.—On Cholera. (*Lancet*, July, p. 57.)

4680. Mayer. — Cholera Maligna. (*Lancet*, July, p. 93.)

4681. Illingworth. — Cholera Maligna. (*Lancet*, August, p. 268.)

4682. Gem.--A Rapid Case of Hydrophobia. (*Lancet*, July, p. 113.)

4683. Palop.—Peculiar Cases of Intermittent Fever. (*Genio Medico-Quirurgico.*)

4684. Thomas, W. R.—The Treatment of Acute Rheumatism. (*Brit. Med. Jour.*, August, p. 335.)

4685. Douty.—The Mental Symptoms of Aortic Regurgitation. (*Lancet*, August, p. 336.)

4686. Thomas.—Gouty Pneumonia. (*Lancet*, August, p. 376.)

4687. Buck.—A Case of Acute Croupous Pneumonia treated by Cold Sponging of the Chest. (*Lancet*, August, p. 378.)

4688. Ferran's Anticholera Inoculations. (*El Siglo Medico*, July 19, 1885.)

4689. Durán, D.—Importance of the Treatment of Initial Diarrhœa of Cholera. (*El Siglo Medico*, Aug. 16, 1885.)

4690. Mikhailoff, I. I.—Notes on an Epidemic of Scarlatina at the Viatka Eparkhialny School for Girls. (*Proceedings of the Viatka Medical Society*, 1884, Nos. 2-6, pp. 1-4.)

4691. Sahli.—The Occurrence and Significance of Dilated Venous Radicles on the Chest. (*Centralbl. für Klin. Med.*, July 18.)

4692. Ebstein.—The Abortive Treatment of Enteric Fever. (*Centralbl. für die Ges. Therap.*, May.)

Art. 4673. *Gason on Two Cases of Intermittent Pneumonia.*—In the *Med. Times and Gazette*, June 1885, p. 741, Mr. Gason, of Rome, describes two cases of intermittent pneumonia. One patient was a man, aged 32, who had got wet whilst driving from the Campagna. Two days afterwards, he complained of shivering and pains in his bones. For ten days this patient suffered from frequent attacks of severe fever, delirium, &c., during which it was noticed that the right lung presented the physical signs of pneumonia. After the signs of fever had continued for a few hours a profuse perspiration followed. The patient fell into a sound sleep, and on waking seemed better; the chest at the same time exhibiting very few signs of any lung-mischief. In a few hours, however, all the symptoms of fever returned, to be followed by another interval of freedom from them. After watching the patient very carefully, the author recognised the intermittent character of the disease; and, contrary to the opinion of several medical men, he decided to try the effect of quinine. A dose of twenty grains was given, followed by ten-grain doses every two hours, until seventy grains had been taken. This produced a marked change. The patient fell into a profound sleep, after which he made a rapid recovery. Another case is also recorded of a young man who suffered from an attack of inflammation of the left lung, and it was noticed that he seemed better one day .but worse the next. In this case also quinine was given, and a rapid recovery ensued.

4674. *Buck on a Case of Recovery from Malignant Pustule.*—In the *Brit. Med. Jour.*, July 1885, p. 15, Dr. W. E. Buck records the case of a veterinary surgeon who examined the flesh of an animal that had died from anthrax. Exactly twelve days afterwards a small blot formed on the back of the right wrist, and the patient had a slight rigor. Within forty-eight hours the temperature had risen to 104°, and the rigors continued almost all day. The wound increased to the size of a sixpence, with a black eschar. It was decided to inject pure carbolic acid under the eschar, with an ordinary hypodermic syringe. A small quantity only was able to be injected, as it oozed out when the needle was withdrawn. The patient was put upon large and frequent doses of soda-hyposulphite, and given a large quantity of meat. Under this treatment, a rapid improvement took place.

4675. *Knox on Three Cases of Sunstroke treated with Quinine and the Douche.*—In the *Lancet*, July 1885, p. 153, Surgeon-Major Knox describes three cases of sunstroke which occurred among the troops at Bareilly during the summer of 1884. One patient was 23 years of age, and was brought into hospital at 5.30 p.m., after having been drinking hard. His temperature on admission was 105° F. After twenty minutes' douching with cold water, the temperature was 99°. Fifteen grains of quinine were given him, and the douche continued until 10.30 p.m., when he became conscious and soon recovered. Another patient was aged 20. He was exposed to the sun on June 27, but was not admitted into hospital until the 29th. Soon after admission he was seized with convulsions, and the temperature shortly rose to 110° F. He was packed in a wet sheet, and in a few hours became conscious, the temperature falling to 101° F. Next morning the temperature was 100°, and he soon made a good recovery. The third case occurred in a man aged 26, who was a very hard drinker. He was exposed to a hot sun, and thirty-six hours afterwards became quite insensible. The temperature was 109°, pulse imperceptible. Ice was applied to the head and spine, and the surface of the body was douched with cold water. In six hours' time the patient was conscious, the temperature 99°, and the pulse 90°. He was given 20 grains of quinine, and rapidly recovered.

4676. *Oliver on Perforating Ulcer of the Bladder.*—In the *Med. Times and Gaz.*, July 1885, p. 77, Dr. Oliver describes an affection which has hitherto been looked upon as more or less peculiar to the stomach and duodenum, viz., perforating ulcer of the bladder. This affection is always acute, and is especially apt to recur. It usually develops without signs of inflammation or suppuration, and, as in the stomach and other parts of the intestinal tract, apparently results from the plugging of vessels which run in and nourish the coats of the viscus. Embolism and thrombosis are the most frequent causes of perforating ulcer in the bladder. The author adds that, in his experience, a rheumatic diathesis augments the tendency to this affection. Females are more prone than males, and especially about the period of puberty. The symptoms and course of this disease are usually very insidious, and fatal peritonitis may result before the condition has been recognised. Pain referred to the hypogastrium, and aggravated by pressure, or by overdistension of the bladder, is a frequent symptom. There is frequency in micturition, with sharp cutting pain at the end of the process. The most distressing symptom is tenesmus, which results from spasm of the muscular coat, and may continue for some time after the organ has emptied itself. The treatment is rest, and milk diet; opiates must be given to relieve pain. [In addition to similar cases noted in sect. 1070 : 2 of the *Medical Digest*, another will be found in the *Lancet*, February 1883, p. 343.—*Rep.*]

4677. *Sturges on a Case of Latent Pericarditis and Sudden Death.*—In the *Lancet*, July 1885, p. 153, Mr. Sturges records the case of a healthy lad, aged 7, who suddenly fell down dead after running about a quarter of a mile. The boy had always been in perfect health and was unusually active; there was no history of any previous illness, and not the slightest suspicion of any heart trouble. A *post mortem* examination revealed a full stomach, a colon distended with flatus, and the sigmoid flexure loaded with fæces. All other abdominal organs were healthy. On opening the pericardium, a fibrous band was found about an inch broad and the same in length, forming a connecting link between the left apex of the heart and the pericardium, covering the surface of the diaphragm. Numerous other string-like adhesions were seen, particularly on the left side and base of the heart, and there was also some recent lymph, but no serious effusion. The left ventricle was decidedly hypertrophied, but all the valves were healthy. The lungs were normal in every way. The immediate cause of death was, no doubt, defective innervation of the heart, which was greatly embarrassed not only by the adhesions and impediments within the pericardium, but also by the loaded and distended condition of the abdominal organs. No cause could be assigned as to the origin of the pericarditis.

4678. *Drummond on the Importance of Early Paracentesis in the Treatment of Ascites.*—In the *Practitioner*, July 1885, Dr. Drummond advocates early and, if necessary, repeated tapping, followed by well-regulated firm pressure, in the treatment of abdominal ascites. The author has found great benefit from this mode of treatment, not only in dropsy dependent upon cirrhosis, but in cases due to cardiac and renal disease. Frequently it has proved curative, whilst it always diminishes the patient's sufferings. When the ascites depends upon a cause which is temporary, then paracentesis, performed early, is the best means of cure.

4679. *Sargent on Cholera.*—In the *Lancet*, July 1885, p. 57, Surgeon-Major Sargent contributes some facts about cholera. It is stated that cholera epidemics commence suddenly, and cease almost as suddenly. The weather has a great deal to do with the appearance of an outbreak of the disease; it is favoured by dull, still, dry weather, but often ceases with the advent of a high and continuous wind. The author has seen five outbreaks of cholera, and does not consider that any of them were due to drinking contaminated water, or to such causes as spread enteric fever, but believes that the atmosphere, in certain districts, is contaminated with cholera-poison. No attendants were ever attacked; and, though cases of cholera were treated in the same ward with patients suffering from other diseases, yet it never attacked such patients. People going into infected districts render themselves liable to be attacked, but there was no instance in which it could be said that a person brought cholera from an infected district and carried it elsewhere. In speaking of treatment, two classes of cases are distinguished; 1, severe, where purging ceases early, and the retching increases in severity, the patient becoming extremely restless, and dying generally in a few hours; 2, where the rice-water stools are very frequent, with occasional vomiting and not much restlessness; these generally recover with careful nursing. It is in cases which tend to pass from the latter to the former class that active treatment is of value. A five-grain dose of calomel, with a little castor-oil, generally causes the discharge from the bowel to recommence, and the retching begins to diminish, so that the patient gradually recovers. The author concludes by stating his theory is that the disease is due to a certain state of the atmosphere which acts upon the susceptible subject, by so altering the constitution of the body as to cause among other symptoms, a drain of the alkalies. He therefore adopts the alkaline treatment, giving alkaline drinks, in small quantities, as often as possible. Plenty of common salt, with arrowroot or corn-flour, is much appreciated by many patients.

4680. *Major on Cholera Maligna.*—In the *Lancet*, July 1885, p. 93, Dr. Major contributes a few remarks on the subject of cholera. The author finds that the best treatment is as follows. Cold drinks should be given without stint, sulphuric acid and opium in the early stage. If collapse supervene, cold applications should be made to the abdomen, and the patient should have doses of calomel of from one to two grains, with half a grain of extract of cannabis Indica, every hour. As soon as the evacuations are checked a diuretic should be given; the best is oil of turpentine in doses of from 15 to 20 minims, every one to three hours. As reaction commences stimulants may be used with discretion, also hot coffee in teaspoonful doses. If the patient have been collapsed for three hours or so, then treatment does not seem of much avail.

4681. *Illingworth on Cholera Maligna.*—In the *Lancet*, August 1885, p. 268, Dr. Illingworth writes that, in his opinion, opium should be avoided in the treatment of cases of English cholera, and that chloral is a safer and better sedative than opium or morphia, and when used with belladonna it is an invaluable remedy for the diarrhœa and vomiting of this disease. The indications in the treatment of cholera are stated to be four in number—1, to check abnormal digestive processes or fermentations; carbolic acid is the best known drug for this purpose; 2, to thin the viscid blood; 3, to stimulate the heart and circulation generally; for these two purposes there is no remedy equal to ammonia; 4, to allay the irritability of the stomach; for this purpose chloral is the most suitable drug. The following formula is recommended in cases of infantile diarrhœa. ℞ Bismuthi, ʒss.; glycerini, ʒiij.; chlorali, ʒss.; tinct. belladonnæ, ♏ xv. ad xxx.; acidi carbolici, ♏ x.; aquam ad ℥ij.; a teaspoonful to be given every two or three hours. A discussion is carried on in subsequent numbers of the *Lancet* upon this subject.

4682. *Gem on a Rapid Case of Hydrophobia.*—In the *Lancet*, July 1885, p. 113, Mr. Gem records the case of a woman, aged 50, who was bitten by a dog in 1885. The bite caused an angry looking wound on the back of the hand, which took five weeks to heal. On June 26 the patient was admitted into the infirmary complaining of a slight catch in the breath, with pain over the ensiform cartilage. Some hours after admission, she complained that she could not swallow anything unless she stood up; but later on it was found that swallowing was an impossibility, on account of the spasms produced during the act. From this time, the sputum became more viscid and more difficult to get up. She also complained of pain over the surface of the entire chest, with great hyperæsthesia of the whole body. Two or three hours before death she had three violent convulsions, producing complete opisthotonos, with great writhing of the whole body and foaming at the mouth. During this time the mind remained clear, but the breathing gradually became more embarrassed, and she died partly asphyxiated, partly comatose, twenty-four hours after admission. At the necropsy, it was found that the meninges of the brain were slightly congested, but on tearing away the layers of the arachnoid from the longitudinal sinus there were patches of recent soft coagulated lymph. The brain-substance appeared normal, but the meninges of the spinal cord were greatly congested, and the medulla and upper part of the cord presented a great many vascular punctures on section. On opening the chest and pericardium signs of pericarditis were present, with a lymphy exudation over the auricle and auricular appendix. The lungs were greatly congested, especially at the left base; the larynx and trachea were congested and full of viscid mucus; the diaphragm was congested at a point opposite the apex of the heart. Other organs were healthy to the naked eye. No microscopic specimens could be obtained.

4683. *Palop on Peculiar Cases of Intermittent Fever.*—In the *Genio Medico-Quirurgico*, Dr. Palop records two cases of intermittent fever, in which he was able to discover and remove the cause, producing instant cure. One case was that of a young man who suffered from a peculiar fever which ran through a regular cycle of modifications every week. On Sunday he would be seized with a cold stage lasting an hour, followed by a severe hot stage, with copious sweating and pain on the left side of the head. On Monday he had no fever, but the pain remained unchanged until the Tuesday or Wednesday, when it increased and spread over the whole head, without any improvement taking place until Saturday. Drugs proved of no use, and no relief was obtained until a small fluid tumour behind the left ear was discovered. On being cut into, a small quantity of blood and pus was evacuated, and a dermoid cyst found; this was removed, and the patient was relieved of all his febrile symptoms. The second case was that of a labourer, attacked with fever of a tertian type. Quinine proved useless, and the symptoms continued until an inflamed bursa over the patella was aspirated; as soon as the pus was removed the fever subsided.

4684. *Thomas on the Treatment of Acute Rheumatism.*—In the *Brit. Med. Jour.*, August 1885, p. 335, Dr. W. R. Thomas, of Sheffield, states that he considers there are three distinct varieties of acute rheumatism, each of which requires a treatment of its own; 1, the sthenic; 2, the asthenic; 3, that caused and preceded by other diseases, as gonorrhœa, scarlet fever, &c. The first kind is generally met with in well-to-do patients. A man, who for some months has noticed that he was always suffering from attacks of headache, indigestion, &c., and one who eats and drinks more than is necessary, suddenly is exposed to damp or wet. Then comes on an attack of acute rheumatism. These are the cases in which salicylate of soda acts like a charm, but many derive equal good from salicylic acid or bicarbonate of potash. Attention to details is of great importance. The whole front of the chest should be covered with cotton-wool; and, if pericarditis come on, it is not advisable to apply anything else unless it be a bad attack, when turpentine fomentations give great relief; these patients should also wear a thin woollen night-shirt. Swollen joints are best wrapped in cotton-wool, unless very painful, then they may be fomented with belladonna fomentations. When it is necessary to procure sleep, nothing answers better than Dover's powder. As an aperient, the author finds five grains of pilula hydrargyri, followed by haustus albus, of great use. As to diet, there is nothing better than milk, until the fever begins to subside. The second variety occurs in weak, over-worked, or over-anxious people. The treatment consists in plenty of nourishment and quinine, with later on a little iron in addition. As an aperient, it is best to give a combination of colocynth and aloes. The treatment of rheumatism following other diseases will vary according to the primary complaint.

4685. *Douty on the Mental Symptoms of Aortic Regurgitation.*—In the *Lancet*, August 1885, p. 336, Dr. Douty contributes a few notes with regard to the relations between heart-lesions and certain forms of insanity. The author records fourteen cases met with in the Worcester Asylum, in which there was incompetence of the aortic valves. Of these eleven were cases of mania, one of dementia, one of dementia with general paralysis, and one of melancholia. Of these eleven cases of mania, seven possessed very marked auditory and visual hallucinations; and from the author's observations he thinks it probable that, when fuller statistics are collected upon this subject, we shall arrive at the conclusion that the typical mental symptom of aortic regurgitation is a delusional mania, coupled with a condition of extreme instability of temperament. As surely as one discovers an aortic regurgitant bruit, almost so surely is one told by the attendant that the patient has an obstinate and irritable temper. Another very common accompaniment of this valvular lesion is the prevalence of hallucinations. Out of the fourteen cases recorded not one recovered. Rest may cause improvement for a time, but the patients always relapse and never entirely recover.

4686. *Thomas on Gouty Pneumonia.*—In the *Lancet*, August 1885, p. 376, Dr. Thomas reports a case of gouty pneumonia in a patient who had always been a free liver and drinker, and who had frequently suffered from gout. The patient was taken ill suddenly one night, and when seen there was dulness at the right base. The urine was scanty and albuminous. He steadily became worse for about eight days, the following night being very delirious, and insisting upon getting out of bed. In spite of the entreaties of the nurse, he continued to walk about for some time; he then went to bed and fell asleep, but awoke complaining of excruciating pain in the right big toe, which became very red and swollen. Two days after the toe had been attacked, the physical signs of pneumonia in the lung had almost disappeared, and air entered fully into every part of the lung. The author points out how each case of pneumonia should be treated according to the habits of the patient, and that the disease is too apt to be treated always by the same means, notwithstanding the varying constitutions of different individuals. In this case, the pneumonia was a local sign of gout: as soon as the big toe became affected, the lung was relieved and quickly recovered.

4687. *Buck on a Case of Acute Croupous Pneumonia treated with Cold Sponging of the Chest.*—In the *Lancet*, August 1885, p. 375, Mr. Buck records the case of a man, aged 35, who was suffering from an attack of acute double basic croupous pneumonia. He was treated with five minims of tincture of aconite, half a drachm of antimonial wine, and five minims of ipecacuanha wine, every four hours. On the third day of the attack the patient was seized with profuse diarrhœa, which was checked by chalk mixture; but his condition grew worse, and on the fourth day he seemed to be rapidly sinking. Mr. Buck then decided to try the effect of cold sponging, and ordered the back and front of the chest to be sponged every hour with cold water, as the temperature had risen to 106° F. Brandy and nourishment were at the same time freely administered. Next day the patient was much better; the temperature fell to 103° F., and all symptoms were improved. Convalescence was established on the fifteenth day, and he got up for a short time. Six weeks subsequently, the lungs revealed no evidence of anything abnormal.

Richard Neale, M.D.

4688. *Ferran's Anticholeraic Inoculations.*—The report of the French Commission has given great offence in the Peninsula, and the medical papers unanimously support Ferran. Dr. Pulido, in the *Siglo Medico* for July 19, shows that Ferran had published the so-called secret of his method of attenuation of the cholera-virus as early as March of this year, in a paper sent in for competition for the Bréant prize of 100,000 francs for the best remedy for cholera. This paper was read before the Academy of Sciences of Paris on April 13, and was published in the *Comptes Rendus* for July. Again, in answer to a series of questions by Van Ermengen and P. Gibier, he wrote: 'The cultivation of the comma-bacillus that I use as a prophylactic liquid produces attenuated effects, in relation with the cellular tissue, in which it is introduced by means of hypodermic injection. That is, my cholera liquid is analogous to that of bacterial or symptomatic carbuncle and that of glanders; the pathogenic or preservative virtue depends more on the site in which it is introduced into the organism, than on anything else. The cholerigenic microbe is attenuated in the medium of cultivation, according to its richness in nutritive material, and according to the chemical reaction determined by the life of the microbe itself.' In answer to the fifth question, 'Can you produce different degrees of attenuation,' he replies, 'Yes, and these depend on the quantity of the cultivation liquid, its density, and richness in microbes and tissue.' Dr. Pulido concludes his paper by stating the following as fundamental facts. 1. One cubic centimètre of a pure cultivation of comma-bacilli may be safely injected in each arm. The cellular tissue is not a favourable site for the development of the microbe, which can only cause a fatal disease by great multiplication in the intestine. 2. The comma-bacillus sown in slightly alkaline nutritive bouillon, at a temperature of 37°, is attenuated in degrees differing according to the richness of the supply of nourishment, alkaline or acid reaction, and the time occupied. Acid reaction reduces considerably the virulence of the cultivation. 3. The virulence of a cultivation is determined by the number of germs present, which can be recognised by the microscope.

4689. *Durán on the Treatment of the Initial Diarrhœa of Cholera.*—Dr. Durán, of Chirivella (Valencia), points out the importance of checking the early diarrhœa of cholera. He says: 'As soon as the disease appeared in this town, with the first cases I became convinced of the uselessness of the ordinary methods of treatment.' Following the example of Tunisi, of Messina, he, enlisting the aid of the priests and the alcalde, published a notice charging all persons with the slightest symptoms of diarrhœa to at once apply for medical aid. Between the 23rd and 30th of July there were 200 people attacked; of these only four passed the stage of sickness, and three deaths only occurred, and these in persons in whom the diarrhœa had lasted for some hours. He prescribes laudanum, and directs it to be taken for some hours after the cessation of the diarrhœa. G. D'Arcy Adams, M.D.

4690. *Mikhailoff on the Treatment of Scarlet Fever.* Dr. I. I. Mikhailoff, of Viatka, reports (*Proceedings of the Viatka Medical Society*, 1884, Nos. 2–6, p. 1) on an epidemic of scarlatina which broke out at a local school for girls, and attacked 22 of 430 pupils, aged from 9 to 14. The disease was of a severe form, with high fever (39°·5 to 41°·5 C.), intense swelling of the tonsils, and of the parotid, and cervical glands, diphtheritic coating of the fauces, &c. In seven of the patients, acute desquamative nephritis set in on the third week of the disease, with profuse albuminuria, anasarca, hæmaturia (in three), drowsiness, and uræmia. Four patients (5·11 per cent.) died; one from uræmia, one from convulsions, and two from diphtheritis of the nose and larynx. The remaining eighteen recovered under treatment, which consisted in wrapping in cold wet bed-sheets (during the stage of acme), warm compresses around the neck, nourishing diet, with wine and iron. Nephritic cases were treated with excellent results by hot-water and steam baths. Subcutaneous injections of pilocarpine proved of no use whatever. V. Idelson, M.D.

4691. *Sahli on Dilated Venous Radicles.*—The *Centralbl. für Klin. Med.* for July 18 contains the report of a very interesting article by Dr. Sahli on the occurrence and significance of a line of dilated venous radicles on the skin, marking the lower margin of the lung, and also outlining the heart's dulness. This is found more in adults than in children, and only in those who have suffered from cough. Dr. Sahli explains the occurrence by the fact that the increased intrathoracic pressure in coughing compresses the internal mammary and intercostal veins, which are separated from the surface only by a very thin layer of soft parts, and that the blood then seeks a passage through superficial veins. He considers that the constantly recurring temporary congestion finally results in a form of chronic endophlebitis, which is the cause of the permanent dilatation.

4692. *Ebstein on the Abortive Treatment of Enteric Fever.*—The *Centralbl. für die Ges. Therap.* for May contains a report of a recent work by Professor Ebstein on the treatment of enteric fever. He recommends the abortive treatment by means of calomel, so long as it is confined to the period of the disease when ulcers are not found in the small intestine. All other treatment must be symptomatic, specially directed to the circumstances of the individual case, and having special reference to diet. The high temperature need not be combated, unless any cardiac or nervous symptoms supervene, or unless it be such as to endanger *per se* the life of the patient. Professor Ebstein uses salicylic acid for this symptom, in the form of a soda-salt, and never in larger doses than 3 grammes (46½ grains) daily. Baths are to be employed chiefly as stimulants, if the heart be not too weak. Sufficient nourishment must be given; and alcohol, camphor, &c., may be resorted to in cardiac debility.

ALICE KER, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

4693. HODGSON.—Paraldehyde as a Hypnotic. (*Brit. Med. Jour.*, July, p. 991.)

4694. ADAMSON.—Tincture of Iodine in Diphtheria. (*Practitioner*, July.)

4695. ROSENBERG.—Menthol as a Substitute for Cucaine. (*Berlin. Klin. Wochensch.*, No. 28.)

4696. PHILLIPS.—Intrapulmonary Injections. (*New York Med. Jour.*)

4697. SPENDER.—The Treatment of an Acute Form of Diarrhœa. (*Brit. Med. Jour.*, August, p. 250.)

4698. Salicylic Acid Suet in Hyperidrosis. (*Brit. Med. Jour.*, August, p. 219.)

4699. GOODRIDGE.—Digitalis in Acute Febrile Diseases. (*Brit. Med. Jour.*, July, p. 10.)

4700. BURROUGHS.—Nitro-glycerine as a Substitute for Alcohol. (*Therapeutic Gazette*, July.)

4701. MACMUNN.—Aphonia and its Treatment. (*Lancet*, July, p. 189.)

4702. WELCH.—The Treatment of Nævus by Ethylate of Sodium. (*Brit. Med. Jour.*, August, p. 344.)

4703. ROBERTS.—Boroglyceride in Skin-Diseases. (*Brit. Med. Jour.*, August, p. 344.)

4704. DUMAS.—Painful Deglutition cured by Cucaine. (*Bulletin Général de Thérap.*, and *Centralbl. für Klin. Med.*, May 20.)

4705. Neuralgia of the Fifth Nerve cured by Salicylate of Cucaine. (*Centralbl. für die Gesam. Therap.*, August.)

4706. ULLRICH.—Another Beneficial Use of Cucaine. (*Allgem. Wiener Med. Zeitung*, June 30.)

4707. MERKEL.—An unusual Idiosyncrasy to Quinine. (*Centralbl. für Klin. Med.*, July 6.)

4708. HADRA.—Paralysis after Injection of Ether. (*Deutsche Med. Wochensch.*, June 11.)

4709. LORENZ.—Ichthyol in Articular and Muscular Rheumatism. (*Deutsche Med. Wochensch.*, June 4.)

4710. FRÄNKEL.—Toxic Effects of Corrosive Sublimate as an Antiseptic. (*Centralbl. für Klin. Med.*, June 13.)

4711. GUAITA.—Benzoate of Soda in Summer Diarrhœa of Children. (*Allgem. Wien. Med. Zeitung*, May 26.)

4712. GASPARINI, L.—Sulphide of Carbon in Neuralgia. (*Gazz. Med. Ital. Lombard.*, Sept. 5, 1885.)

4713. VASILIEFF, N. P.—On the Action of Cerium on the Animal System. (*Ejenedelnaia Klinitcheskaia Gazeta*, 1883, No. 32, p. 505-7, and No. 33, p. 521-3.)

4714. WALTER, P. A.—On the Influence of Antipyrin on Nitrogenous Metamorphosis and Assimilation in Febrile Patients. (*Vratch*, No. 30, 1885, pp. 489-91.)

4715. JIVOPISTZEFF, NICOLAI A.—On Hydrastis Canadensis in Uterine Hæmorrhage. (*Meditz. Obozr.*, 1885, Vol. xxiv., No. 14, pp. 115-120.)

4716. HESS, NIKOLAI F.—A Contribution to the Study of the Diaphoretic Treatment of Nephritic Patients. (*St. Petersburg Inaugural Dissertation*, 1885, p. 108.)

4717. BRONEVSKY, MIKHAIL.—A Contribution to the Pharmacology of Wind-Flower (Pulsatilla). (*St. Petersburg Inaugural Dissertation*, 1883, p. 68.)

4718. STRIZOVER, M.—On the Treatment of Siberian Plague. (*Vratch*, 1885, No. 27, p. 438.)

ART. 4693. *Hodgson on Paraldehyde as a Hypnotic.*—In the *Brit. Med. Jour.*, July 1885, p. 99, Mr. G. F. Hodgson contributes his experience after using paraldehyde as a hypnotic in a large number of cases, consuming two quarts of the drug. The author states that the sleep produced by this medicine is calm, closely resembling that of health, with no unpleasant premonitory or after-effect, and its action is prompt. It is most appropriate in cases of mania, hypochondriasis, delirium tremens, and migraine, as well as in the multifarious minor diseases in which insomnia prevails. Its great advantage over chloral is, that it does not have a depressing influence upon the heart. The insomnia of gout, whether acute or chronic, is most advantageously treated by paraldehyde, as it helps to maintain the excretion of urine well charged with its normal solid constituents. In cases of irritable or inflamed states of the throat or stomach, it cannot be prescribed, on account of its acridity, and, indeed, in any case it must be given well diluted. The following formula is recommended. ℞ Pulv. tragacanth. comp. ℈j; syrup aurant. ʒiv.; paraldehyd. ʒj; spirit. chlorof. ♏ xv.; aquam ad ℥iij. In mild cases, one such dose at bedtime is sufficient, but in severe cases this must be repeated in an hour or so. By combination with morphia or with bromides, the soporific effect of both medicines seems enhanced.

4694. *Adamson on Tincture of Iodine in Diphtheria.*—In the *Practitioner*, July 1885, Dr. Adamson recommends the internal administration of iodine in cases of diphtheria. The dose for an adult is five to seven minims of the tincture every one or two hours; and for children, from six to twelve years, two to three minims in syrup of orange every two hours. Iodine thus taken may be thoroughly relied upon in order to promote the separation of exudative membranes, to check the formation of new exudations, to lessen the secretion of viscid offensive saliva, and to destroy the vile fœtor of the breath. Within thirty-six hours an improvement can be seen. Out of 55 cases thus treated, 53 recovered without any troublesome sequelæ whatever. Of the two fatal cases, in only one did the iodine seem to fail.

4695. *Rosenberg on Menthol as a Substitute for Cucaine.*—In the *Berlin Klin. Wochensch.*, No. 28, Dr. Rosenberg writes that he finds an etherial or alcoholic solution of menthol (20 to 30 per cent.), an useful substitute for cucaine in cases where anæsthesia of the nose, pharynx, &c., is required. The effect of menthol is not so lasting as that of cucaine, but it has a more cumulative action.

4696. *Phillips on Intrapulmonary Injections.*—In a recent number of the *New York Med. Jour.*, Dr. Wendell Phillips publishes two cases in which he used intrapulmonary injections of iodine in cases of phthisis. One patient was in the last stage of the disease, and a single injection of ten drops of Lugol's diluted solution was made in the third intercostal space. The patient lived only two days; and, though life was not prolonged, the dyspnœa and severe muscular pain were so much relieved that he was no longer compelled to sit up in bed, and his last hours were rendered easier. Another patient was a woman, aged 50, with marked phthisical symptoms; after five injections, made at intervals of a few days, her cough became much less troublesome, she was able to go upstairs with ease, and could perform her ordinary duties with much less fatigue. In giving these injections, the author uses an ordinary hypodermic syringe, thrusting the needle its whole length into the third interspace, in the nipple-line. They cause no pain, but occasionally produce a severe paroxysm of coughing, and iodine is often tasted in the mouth.

4697. *Spender on the Treatment of an Acute Form of Diarrhœa.*—In the *Brit. Med. Jour.*, August 1885, p. 250, Dr. Spender writes that he has found a formula, published by Dr. Young, of Florence, in the *Practitioner* for March 1875, of great advantage in cases of sudden and acute diarrhœa, often met with during August and September. It is as follows. Take 2 minims of castor-oil, and 3 or 4 minims of solution of hydrochlorate of morphia, and rub them into an emulsion with gum acacia; then add a little spirits of chloroform, and syrup. These quantities form a single dose, which must be repeated every hour, or every two hours, according to the urgency of the case. If after four or five doses the remedy do no good, it ought not to be continued.

4698. *Salicylic Acid Suet in Hyperidrosis.*—In the *Brit. Med. Jour.*, Aug. 1885, p. 219, it is noted that the German army surgeons recommend the use of salicylic acid suet as a remedy for extreme sweating of the feet. It is composed of 2 parts of pure salicylic acid to 100 parts of best mutton suet.

4699. *Goodridge on Digitalis in Acute Febrile Disease.*—In the *Brit. Med. Jour.*, July 1885, p. 10, Dr. Goodridge publishes a paper on the employment of digitalis in acute febrile disease. There are two diseases in which, at certain stages, digitalis is most valuable. One is croupous pneumonia, where, along with high fever, there may be extensive consolidation of the lung. In these cases, it is necessary to keep up the heart's action until the crisis is over. The other disease is enteric fever. Here also we have evidences of heart-failure, especially about the third week, and the use of a drug like digitalis must be very useful, first, in increasing the force of the heart's action, and, secondly, in increasing arterial tension by constricting the arterioles. The author gives a tabulated account of twelve cases of pneumonia, and twelve of enteric fever, in which digitalis was given. From these, he concludes that in every instance of recovery the pulse was found not to fall to any appreciable degree, under the administration of digitalis, until the arrival of the crisis, or rather of the defervescence, which took place sometimes by lysis. In three cases which succumbed, the pulse-rate increased in spite of the digitalis. In using digitalis in cases of fever, it must be borne in mind that there may be little evidence of the action of the drug during the fever stage, but that it may take effect with cumulative energy after the crisis, producing toxic effects.

4700. *Burroughs on Nitro-glycerine as a Substitute for Alcohol.*—In the *Therapeutic Gazette*, July 1885, Dr. Burroughs recommends the employment of nitro-glycerine as a substitute for alcohol. As a heart-stimulant it is far superior to brandy, and may be given with confidence wherever the administration of brandy is indicated. Its advantages are, in the first place, that a very small quantity is required, one or two drops of the 1 per cent. solution being equivalent to one ounce or more of brandy; secondly, that it is tasteless, colourless, and practically odourless; thirdly, that it acts immediately, and without any appreciable interval; and, finally, that it is not likely to induce a craving for alcoholic stimulants.

4701. *MacMunn on Aphonia and its Treatment.*—In the *Lancet*, July 1885, p. 189, Dr. MacMunn writes that many years ago he was treating a young girl, aged 13, for nervous aphonia. All kinds of remedies were tried in vain, and her father requested the author to accompany him to 'a quack who would soon cure her.' The patient was taken to a cobbler—noted for his cleverness in throat-affections. Having examined the inside of the mouth carefully, the specialist declared that the 'arch of the palate was down, and that it must be lifted.' Wrapping his apron round the fingers of one hand, he applied them to the upper front teeth, while he supported the occiput with the other hand, and, without further ceremony, he lifted the child from her seat two or three times. The girl got up, and was able to speak quite normally. The affection, however, relapsed after some days, but was again cured by the same procedure. The author suggests that the cure in this case was produced by stretching the recurrent laryngeal nerves, by the forcible extension of the neck.

4702. *Welch on the Treatment of Nævus by Ethylate of Sodium.*—In the *Brit. Med. Jour.*, August 1885, p. 344, Mr. S. Welch writes that he finds ethylate of sodium very efficacious in the treatment of nævi. Two coatings of the ethylate are painted over the nævus on two consecutive days, care being taken to protect the surrounding skin. In all instances of superficial nævi, this treatment is completely successful. When the nævus affects the subcutaneous tissues, a second, or even a third, repetition of the remedy is required. [For papers by several observers since Dr. Richardson introduced his valuable agent, *vide Medical Digest*, 737 : 6, where it will be seen that the treatment by sodii ethylas bids fair to supersede all others.—*Rep.*]

4703. *Roberts on Boroglyceride in Skin-Diseases.*—In the *Brit. Med. Jour.*, August 1885, p. 344, Mr. C. Roberts states that boroglyceride is most useful in the treatment of psoriasis and other scaly affections, and especially in allaying the itching which accompanies many forms of skin-affections. In the

Philadelphia Med. News, Dr. MacSmith states that boroglyceride is a marked hæmostatic, antiseptic, deodorant, and germicide. A 25 per cent. solution is most useful in staying capillary hæmorrhage after amputations, &c. Chronic ulcers, if washed first with alcohol, then with a 50 per cent. solution of boroglyceride, are found to heal rapidly. Boroglyceride with carbolic acid forms a most useful injection in gonorrhœa. In gynæcology this drug is found most useful, and a tampon moistened with it may be left in for eight or ten days without being offensive. The following ointment is very useful in the treatment of ocular diseases: Boroglyceride (50 per cent. sol.) ℥ij., vaseline ℥vj., oil of roses q. s. Heat the boroglyceride, and, while hot, slowly add the vaseline, stirring carefully until well mixed.

RICHARD NEALE, M.D.

4704. *Dumas on Painful Deglutition Cured by Cucaine.*—The *Centralbl. für Klin. Med.* for May 20 contains the report of a case communicated by Adolphe Dumas to the *Bulletin Général de Thérap.*, in which painful deglutition was cured by the application of cucaine. The case was one of extensive laryngeal tuberculosis, in which the least effort to swallow either liquid or solid food produced so much pain, that everything attempted to be taken was immediately vomited up again. Bromide of potassium, morphia, and iodoform were applied without avail, but brushing the mucous membrane over the glottis with a solution of cucaine (25 parts in 1000) enabled the patient to eat without pain or coughing. The application had to be repeated at first after the lapse of a few minutes, but a very great improvement was soon attained in the condition of the patient, due partly to the increased nourishment taken, and partly to the tonic action of the cucaine absorbed.

4705. *Neuralgia of the Fifth Nerve cured by Salicylate of Cucaine.*—The *Centralbl. für die Gesam. Therap.* for August contains the report of a case of neuralgia of the fifth nerve, cured by salicylate of cucaine. The patient had already had two attacks. The first, five years before, was cured by the use of quinine; the second lasted six months, and gradually subsided on the employment of morphia and iron; and it was for the third attack that the new remedy was employed. Four decigrammes (6 grains) were injected into the cheek, causing complete cessation of the pain, a general feeling of comfort, and no irritation or soreness. After eight injections in the course of six days, pain was felt only on pressure on the point of exit of the nerve; and this was removed by three applications of the galvanic current, the anode being placed on the painful spot.

4706. *Ullrich on a Beneficial Use of Cucaine.*—Dr. Ullrich, of Reichenberg, communicates to the *Allgem. Wiener Med. Zeitung* of June 30, an account of another beneficial use of cucaine. A woman, aged 30, cut the middle finger of her right hand about the middle of November 1884, and dressed the wound with some concentrated carbolic acid which she happened to have in the house. The result was the onset of most acute pain, which continued without intermission, even after gangrene had set in and had necessitated amputation of the finger. When Dr. Ullrich was called to the case, in the end of February, he found the patient in a most deplorable condition, the pain never having ceased for a quarter of an hour since the first application of the acid, and the loss of sleep and the exhaustion having reduced her to a state of great weakness and emaciation. The flaps made at the operation had sloughed away, and the wound remained discoloured and offensive, with a copious discharge; while the least touch, even with a gentle stream of warm water, increased the pain to agony. Dr. Ullrich brushed the wound over with a solution of cucaine, 1 in 10, which reduced the pain almost to nothing in the course of a few minutes, and then applied iodoform, leaving the dressing unfastened, so that the cucaine could be re-applied if necessary. On the first day the applications had to be frequent, from recurrence of the pain, and there was a good deal of discharge; but granulations soon covered the wound, and in four weeks cicatrisation was complete. The joints of the arm remained somewhat stiff, and the muscles atrophic, from the long-continued maintenance of the same posture.

4707. *Merkel on a Peculiar Idiosyncrasy with regard to Quinine.*—The *Centralbl. für Klin. Med.* for July 4 quotes a case reported by Dr. Gottlieb Merkel of Nuremberg, in which there was a peculiar idiosyncrasy with regard to quinine. A woman, aged between 30 and 40, suffering from a slight attack of a malarious nature, was given a dose of 2 decigrammes (3 grains) of quinine. Within an hour feelings of weakness began to come on, followed by a rigor, and a rise of temperature to 40°·3 C. (104°·5 F.) in the rectum. This occurred each time a dose of quinine was administered, showing a very unusual idiosyncrasy.

4708. *Hadra on Paralysis of the Arm after Injection of Ether.*—At the sitting of the Berliner Medicinische Gesellschaft, on June 3 (*Deutsche Med. Wochensch.*, June 11) Herr Hadra showed a patient, in whom paralysis of the arm had been produced by ether injections for *post partum* hæmorrhage. The right arm, into which the injections had been made, measured already, thirteen days after the birth, 2½ centimètres less than the left; the symptoms were those of partial paralysis of the deep branch of the radial nerve, after the giving off of the branch for the extensor minimi digiti. The case is the tenth of the kind which has been observed, and it shows the care with which ether injections should be given, and their site selected.

4709. *Lorenz on Ichthyol in Rheumatism.*—In the *Deutsche Med. Wochensch.* of June 4, Dr. Lorenz, army surgeon in a West Prussian regiment of Uhlans, cites a case in which he successfully employed ichthyol for articular and muscular rheumatism. The patient was a married woman, aged 29, who was seized, about Christmas, 1882, with severe pains in the ankles, which quickly swelled; and the pain then passed on to the knees, wrists, and elbows. This went on without intermission until she came under the care of Dr. Lorenz, in October 1884, when she was so prostrated that she had to be carried to his rooms. No fever or cardiac complication was present. Salicylates, colchicum, aconite, iodide of potassium, and various other remedies, internal and external, had been already tried without effect; and Dr. Lorenz had recourse, almost in despair, to ichthyol, as recommended by Unna. He ordered it, in combination with 70 per cent. of paraffin, to be applied to the joints, with the result that the patient could mount steps without assistance, although indeed somewhat feebly, in fourteen days. She was subsequently able to perform her household duties without any pain whatever, although some of the joints remained a little thickened. Dr. Lorenz has found the drug, applied pure, of great service in a case of whitlow of the thumb, allaying pain and swelling as if by magic; and also very beneficial in a case of mastitis, with great pain and swelling of the mamma, where it was applied with equal parts of water. The application may be made either as an ointment combined with paraffin, as an emulsion with water, or pure, applied after washing, and covered up with cotton-wool.

4710. *Fränkel on the Toxic Effects of Corrosive Sublimate Used as an Antiseptic.*—The *Centralbl. für Klin. Med.*, of June 13, contains a summary of Dr. E. Fränkel's experience of the toxic effects on the intestine of the use of corrosive sublimate as an antiseptic. In the course of two and a half years, he has seen fourteen cases of toxic enteritis in the hospital at Hamburg, and has come to the conclusion that, although corrosive sublimate is the most certain antiseptic so far as the wound is concerned, yet its employment is associated with danger to the organism, in the shape of diphtheritic inflammation of the large, and sometimes also of the small intestine, especially in patients who are much reduced in strength or who suffer from fatty heart, if the solution have come into contact with large surfaces of the body, or with a readily absorbing membrane, such as the internal surface of the uterus. He finishes by recommending that the strength of the solution should be as weak as is consistent with being antiseptic, and that the frequent bathing of a wound, or washing out of the puerperal uterus, which is now common, should be avoided.

4711. *Guaita on Benzoate of Soda in Summer Diarrhœa of Children.*—The *Allgem. Wien. Med. Zeitung* for May 26 contains a recommendation by Dr. Guaita, of benzoate of soda for the treatment of summer diarrhœa in children. He considers the affection to be zymotic in character, depending on the presence of a special microbe; and his plan is, after a small purge of calomel or jalap, to administer benzoate of soda, 4 to 6 grammes (60 to 90 grains) in the twenty hours, for two days in succession, then a milder purge, such as magnesia or manna, and then more of the benzoate if necessary. No food should be given, only a little lemonade and good wine; but infants at the breast may be fed every six hours. Out of fifty-three cases, between the ages of six months and two years, treated in this way, no death has occurred. ALICE KER, M.D.

4712. *Gasparini on Sulphide of Carbon in Neuralgia.*—Gasparini gives fifteen cases of neuralgia cured by sulphide of carbon. Ten or twelve drops of the liquid are to be poured on cotton-wool and applied to the painful spot; in a few minutes this application gives rise to a burning sensation, but does not blister. The unpleasant smell of the sulphide is masked by essence of peppermint. The relief resulting from the application of the sulphide of carbon must be attributed to its effect as a counter-irritant. *Dolor major minorem solvit* is the explanation of its action. G. D'ARCY ADAMS, M.D.

4713. *Vasilieff on the Action of Cerium on the Animal System.*—In the *Ejenedelnaia Klinitches-kaia Gazeta*, Nos. 32 and 33, 1883, Dr. N. P. Vasilieff, of St. Petersburg, communicates the results of his experimental study (in Professor Schmiedeberg's laboratory in Strasburg) of the action of cerium in frogs, rabbits, dogs, and cats. To simplify the matter—that is, to altogether dismiss the question of any possible mechanical action of cerium salts on the organism through their coagulating proteids—the author used for his experiments only double tartrate of cerium and sodium, and double citrate of cerium and sodium, which salts do not precipitate albumen and do not cause any local irritation of the tissues. The author arrived at the following conclusions. I.—*Frogs* (in which cerium salts were introduced into the lymphatic sacs, in doses of 20 to 60 milligrammes). 1. In the first instance, cerium acts on the heart; it paralyses, first, the excito-motor apparatus, and then the cardiac muscle itself, and thus causes at first weakening of the cardiac action, and finally a full stoppage of the heart in diastole. 2. The irritability of the motor nerves and muscles of the body remains intact. 3. The general paralysis, which occurs by the end of cerium-poisoning, is caused in all probability, by the arrest of the cardiac action. II. *Mammals.*— 1. The internal administration (through a gastric sound) of daily doses of 0·5 to 0·8 gramme to rabbits and 0·8 to 1·5 gramme to dogs does not produce any visible disturbances. 2. On hypodermic or intravenous administration there follow (very rapidly or in a few hours, according to the dose) symptoms of poisoning, and, in four to twenty-four hours, death. 3. In mammals, as in frogs, cerium acts mainly on the heart, paralysing the excito-motor apparatus and the cardiac muscle. This action constitutes the chief cause of a gradual decrease in the arterial tension, which is observed in the animals poisoned by cerium. 4. Paralysis and drowsiness (which often deepened into a comatose state), and other nervous symptoms occurring in the course of cerium-poisoning, are probably caused mainly by disturbance of the circulation in the nervous system, which disturbance develops itself as a consequence of failure of the heart. Discussing the results given above, Dr. Vasilieff reaches the general conclusion that the experiments on the animals do not supply us with any indications for the therapeutic use of cerium. Apparent favourable results, obtained by some authors from the treatment of gastro-intestinal affections (Simpson, Ch. Lee, Image, Lucas, Clarc, Markiewitz, &c.), might be partly explained by their using insoluble oxalate of cerium, which, like magisterium bismuthi, can act locally on the gastric mucous membrane, as a mild astringent agent.

4714. *Walter on the Influence of Antipyrin on Nitrogenous Metamorphosis and Assimilation in Febrile Patients.*—In a preliminary note in the *Vratch*, No. 30, 1885, p. 489, Dr. P. A. Walter publishes the outcome of his observations (on several febrile patients at Professor V. A. Manassein's clinic) undertaken in order to answer the question—'does, or does not, antipyrin fulfil the conditions which are essential for every really useful antipyretic remedy; that is, does it, or does it not, diminish the process of decomposition of tissues or the production of heat, without any interference with assimilation of the food, and without any harmful action on the heart, brain, &c.?' The patients (with pleuro-pneumonia, bacillar phthisis, typhus fever, pleuritic exudation) experimented upon received for six days only milk, cranberry juice with water, and common water. For the first three days of the observation, no antipyrin was given; for the next three days the drug was given in such doses as to constantly keep the temperature at an apyretic level, the purpose being attained by daily doses varying from 3 to 8 grammes. The milk and urine were analysed after Kjeldahl-Borodin's method. The results as given by Dr. Walter are these. 1. Antipyrin is an excellent and sure antifebrile remedy, free from any unpleasant accessory action. 2. While lowering the febrile temperature, antipyrin also lowers the nitrogenous metamorphosis of tissues, without producing any injurious effects (such as enfeeblement of the cardiac action, action on the brain, &c.). 3. In the majority of cases, the assimilation of nitrogenous substances of the food undergoes improvement under the influence of antipyrin. The author notes also that antipyrin sometimes exercises a favourable influence on diarrhœa.

4715. *Jivopistzeff on Hydrastis Canadensis in Uterine Hæmorrhage.*—In the *Meditz. Obozr.*, 1885, Vol. xxiv., No. 14, p. 115, Dr. Nikolai A. Jivopistzeff, house-physician in the gynæcological wards of the Emperor Paul's Hospital, in Moscow, states his experience of the therapeutic effects of fluid extract of hydrastis Canadensis, which he has administered in over twenty cases of uterine hæmorrhage of various descriptions (menorrhagia, flooding from uterine atony, fibroids, cervical cancer, &c.). The drug was given in twenty-minim doses four times a day. The author found that 'the best results from hydrastis were obtained in cases of chronic and subacute hæmorrhage depending on an inflammatory condition of the uterine tissues and surrounding pelvic organs,' as well as on displacements of the womb. 'In other words (the author says), successful results from the use of hydrastis may be expected only in cases where the uterus is firm, enlarged, tender; where its mucous membrane is inflamed, softened, or even ulcerated; or where there is some exudation around the womb.' In all other cases, success is more or less doubtful. Thus, in cases of uterine fibroids and cervical cancer, the hydrastis treatment utterly failed to control bleeding. Dr. Jivopistzeff confirms the statement that hydrastis produces a favourable influence on dyspepsia, which often accompanies diseases of the female sexual sphere. Under the treatment, digestion improves, gastric pain and tenderness disappear.

4716. *Hess on the Diaphoretic Treatment of Nephritis.*—Following the suggestion of Professor V. A. Manasseïn, Dr. Nicolai F. Hess (*St. Petersburg Inaugural Dissertation*, 1885, p. 108) made comparative observations on the effects of the treatment of nephritis by wet packings, hot baths with subsequent wrapping in woollen blankets, and hot-air baths. The experiments were carried out at St. Maria Magdalena's Hospital, in St. Petersburg, on six patients, two of whom suffered from chronic interstitial nephritis, two from chronic parenchymatous nephritis, one from acute parenchymatous nephritis, and the last presented an exacerbation of chronic parenchymatous inflammation of the kidneys. The number of observations was sixty (fifteen wet packs, twenty-four hot-water baths, and twenty-four hot-air baths), each of the patients being alternately subjected to each of the diaphoretic procedures. The author arrived at the following results. 1. The least rise of temperature of the body is produced by wet packings, the temperature of water used being 19° to 22° Reaumur, the duration of packing an hour; the greatest by hot-water baths, at 32° to 34° Reaumur, of twenty to thirty minutes' duration; hot-air baths, at 40° to 58° Reaumur of twenty to forty minutes' duration, stand midway between the two methods. 2. While the temperature falls already in twenty minutes after the packing, it remains elevated even an hour after a hot-air or hot-water bath. 3. After hot-water baths, the temperature returns to its normal level more slowly than after hot-air baths. 4. Under the influence of wet-packing the pulse becomes slower, the retardation remaining considerable even twenty minutes after the pack; on the contrary, it is considerably quickened from hot-water and hot-air baths. The increase in its frequency, on the average, is greater in the case of air baths than in that of water baths; but in the former the pulse returns to the standard more rapidly than in the latter. In both cases, it remains still quickened even an hour after the bath. 5. Under the influence of wet-packings, respiration is quickened, but very moderately. It becomes far more frequent after hot-water and air baths, especially after the former. It returns to the normal most rapidly after hot-water baths. 6. The least powerful sudorific effects are produced by wet-packings; the most powerful by hot-water baths, with subsequent wrapping in woollen blankets. Hot-air baths occupy a middle stand between the two. 7. In spite of the fact that hot-water and hot-air baths are accompanied by fairly strong symptoms of excitement, whilst wet-packings, on the contrary, produce a soothing effect on the nervous system, the patients most readily subject themselves to hot-water baths, but not to wet-packings; the circumstance which must be ascribed to a stronger diaphoretic action of the said baths, and to an improved subjective feeling of the patients after hot-water bath. [The results attained by Dr. Hess from wet-packings are almost identical with those published by Dr. Tcherniavsky; *see* London Medical Record, July 1884, p. 296.—*Rep.*]

4717. *Bronevsky on the Pharmacological Action of Wind-Flower.*—Dr. Mikhaïl Bronevsky studied experimentally (*St. Petersburg Inaugural Dissertation*, 1883) the action of various preparations of officinal pulsatilla (that is, of *Anemone pratensis* and *Anemone pulsatilla*) and anemonine in frogs and rabbits, and found that the latter chemical body represents the single active principle of wind-flower. According to the author, in frogs anemonine and pulsatilla at first stimulate and then paralyse the respiratory centre, excite the inhibitory cardiac centre in the medulla oblongata, and act on the brain and spinal cord, causing general weakness and paralysis of all voluntary muscles in the body. Death ensues from the arrest of the heart. A subcutaneous injection of 3 grammes of officinal extract, infusion (10 to 100 of water), decoction (10 to 100 of water), and officinal tincture of leaves of pulsatilla, kills the animal in 3 or 4 hours; smaller doses (of 2 to 1 gramme), in 24 hours. A subcutaneous injection of 0·1 gramme of anemonine destroys the frog in about 1 hour; 6 centigrammes, in about 3 hours; 4 centigrammes, in about 4½ hours; 1 centigramme, in about 24 hours. In warm-blooded animals, anemonine acts more slowly and less intensely; a hypodermic injection of 2 grammes of the drug kills the rabbit in 24 to 36 hours. The action of the poison here is pretty much the same as in the case of cold-blooded animals; there occur a gradually increasing dyspnœa, retardation and stoppage of the cardiac action, general weakness, paralysis of the limbs; large doses invariably produce diarrhœa. The *post mortem* examination shows an intense hyperæmia of all parenchymatous organs which is dependent on paralysis of the vaso-motor centres in the medulla oblongata. Dr. Bronevsky tried anemonine internally in two cases of whooping-cough, two of bronchial catarrh, and one of bronchial asthma, and obtained 'entirely satisfactory results.' The drug was given in quantities of 5 to 10 centigrammes daily, in powders, every two hours. Having tried the drug upon himself, the author found that a dose of 0·2 gramme produces headache and feeling of weight in the limbs, which symptoms, however, disappear in the course of the day.

4718. *Strizover on the Treatment of Anthrax by Subcutaneous Injections of Carbolic Acid.*—In the *Vratch*, No. 27, 1885, p. 438, Dr. M. Strizover, of Bessarabia, writes enthusiastically on the treatment of Siberian plague after the method of Raimbert and Jarnovsky (see Jarnovsky's and Schaeffer's articles in the London Medical Record, Nov. 1884, p. 499, and May 1885, p. 192). Recently, during three weeks he met eight cases of facial anthrax, two of them being in suckling infants, and all of them treated by hypodermic injections of a 3 per cent. solution of carbolic acid, four syringe-fuls at a time (around the pustule), twice daily. All the patients recovered without any symptoms of carbolic poisoning. The largest number of injections used was sixteen. Dr. Strizover thinks that carbolic acid may be considered as a 'specific remedy' for Siberian plague, like quinine for malarial fever.

V. Idelson, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

4719. Wilson, Dr. H. P. C.—Foreign Bodies left in the Abdomen after Laparotomy. (*Transactions of the American Gynæcological Society*, vol. ix.)

4720. Sauve.—Hysterectomy in Cancer of the Uterus. (*Thèse de Paris*, 1884.)

4721. Poliakoff, F.—A Contribution to the Statistics of Plural Gravidity. (*Meditz. Obozrenie*, Fasc. x., 1885, pp. 1015-16.)

4722. Hoshkevitch, M. I.—On the Prevention of Habitual Abortion. (*Vratch*, No. 4, 1885, pp. 52, 53.)

4723. Koppe.—On Hydrochlorate of Cucaine as an Anæsthetic Means in Dilatation of the Female Urethra after Simon's Method. (*Meditz. Obozr.*, 1885, vol. xxiv., No. 15, pp. 255-6.)

4724. Imlach.—Diabetes Mellitus cured by Removal of the Uterine Appendages. (*Brit. Med. Jour.*, July, p. 61.)

4725. Rae.—A Case of Conception without Reappearance of the Menstrual Flow. (*Brit. Med. Jour.*, July, p. 16.)

4726. Duke.—Avoidance of Rupture of the Perinæum. (*Lancet*, July, p. 99.)

Art. 4719. *Wilson on Foreign Bodies left in the Abdomen after Laparotomy.*—A married woman, aged 29, five months pregnant, underwent ovariotomy at St. Vincent's Hospital, Baltimore, on Feb. 20, 1883. Dr. Wilson removed a large dermoid tumour of the right ovary. On March 9, after severe abdominal pains lasting for several days, she miscarried. An abscess formed close to the umbilicus and broke on March 23, in the upper angle of the abdominal wound. A fistulous opening formed and closed. On April 16 she returned to her home in the Alleghanies. Dr. Hocking, her own practitioner, found that one inch and a quarter above the umbilicus, directly in the median line, extending about three inches from side to side, and one inch from above downwards, the abdominal wall was thickened and indurated, forming a tumour-like mass, resonant on percussion. The mass soon became softer, and broke on May 14, discharging a great quantity of dark, offensive pus. The abscess-cavity was syringed out with antiseptic solutions daily, till on July 15 a dark-coloured object, 'about half the size of a silver three-cent.-piece, was observed to float out with the contents of the syringe. It proved to be a piece of sponge. The opening was enlarged, and another piece was removed with a pair of dissecting forceps. This produced free bleeding, and the remainder of the sponge was taken away piecemeal, till Aug. 7, when the last vestige was removed. The patient made a rapid recovery.' Dr. Wilson has collected 21 cases of foreign bodies left in the abdomen after laparotomy; 6 of these occurred in America, none of which, except Dr. Wilson's, have been published. In 5 of these it was a sponge that had been overlooked, 1 of these cases being fatal; the sponge was not discovered till the necropsy. In 2 of the 5 the sponge was remembered when the abdominal wound was being closed, an assistant in both cases pointing out the oversight'; in 1 the wound was reopened shortly after the operation; the fourth non-fatal case was Dr. Wilson's. In 1 of the entire 6 American cases, a *post mortem* examination disclosed a pair of forceps. Ten out of the 15 British and European cases have been unpublished, but are noted by Mr. Lawson Tait, in whose practice occurred an eleventh, where a sponge was torn in halves and thus caused a false reckoning at the end of the operation. The result was fatal. (A similar case occurred in Switzerland, and is published in an article, 'Ovariotomy in Switzerland,' *British Medical Journal*, vol. i., 1882.) In the remaining 4, where Sir Spencer Wells, Carl Braun, and Gustav Braun were the operators, forceps were left behind in 2, and a sponge in each of the other 2; the Dr. Brauns' cases were both fatal.

Alban Doran.

4720. *Sauve on Hysterectomy in Cancer of the Uterus.*—In his inaugural dissertation (*Thèse de Paris*, 1884) the author gives an account of a large number of cases, and comes to the following conclusions: Hysterectomy is a legitimate operation in many cases of cancer of the uterus, and when the disease recurs it is generally less painful than the primary tumour. Colpohysterectomy is the best method; and laparotomy should never be performed unless the tumour be too large to be extracted through the vaginal incision. No operation ought to be undertaken when the cachexy is marked, or when there is reason to think that the circumuterine tissues are involved.

J. S. Keser, M.D.

4721. *Poliakoff on a Case of Quintuple Labour.*—In the *Meditz. Obozrenie*, Fasc. x., 1885, p. 1015, Dr. F. Poliakoff describes a rare case of quintuple labour which has lately taken place in the village Sarai, Sapojok district, Riazan Government. The patient, a peasant woman, aged 27, who had been married nine years and delivered six times (at full term, and each time of a single fœtus), came to the Sapojok Zemsky Hospital in the beginning of February (about five months after her last catamenia) on account of enormous enlargement of her abdomen, which caused extreme difficulty in breathing and general weakness. On examination, the fundus of the oblong-round uterus was found at the highest level of the epigastric region; feeble fœtal cardiac sounds were heard in the right hypochondrium; there were felt some small fœtal parts on the left of the linea alba. In view of the enormous size of the womb, plural pregnancy was suspected. On Feb. 28, in the evening, uterine contractions commenced; and on March 1, at eight o'clock A.M., labour ensued. The patient was delivered of five female fœtuses, which followed one another at the intervals of a few minutes, two of them being in pelvic, three in head, presentations. Each of them was enclosed in a separate sac (unruptured amnion). The first fœtus (a monster) was dead; the remaining four were alive, but died soon after rupturing their sacs. The placenta, which was single, and weighed 585 grammes, was squeezed out after Credé's method. There were five amnia and a single chorion, common to all; the umbilical cords were attached along the margin of the placenta. Four of the fœtuses were normally developed, their individual weight being about 590 grammes, and their size varying from 29 to 31 centimètres. The fifth measured 41 centimètres in length, weighed 934 grammes, and presented considerable anomalies (elephantiasis-like swelling of the integuments of the head, microcephalia, defective numbers of fingers and toes, &c.). The umbilical cord of the monster contained only two vessels (one artery and one vein), while the cords of the remaining four fœtuses consisted of three vessels. These rare specimens have been presented by Mrs. A. M. Klausmann, the midwife in whose practice the case had occurred, to the pathological museum of the Novo-Ekaterinensky Hospital. [For similar cases, *see* Dr. R. Neale's *Medical Digest*, Sect. 1578:2.—*Rep.*]

4722. *Hoshkevitch on Iodide of Potassium in Habitual Abortion.*—In the *Vratch*, No. 4, 1885, p. 52, Dr. M. I. Hoshkevitch, of Kherson, recommends a prolonged and systematic internal administration of iodide of potassium to pregnant women disposed to habitual abortion. The proposal starts from the view that 'habitual abortion is almost exclusively caused by syphilitic and inflammatory disease of the maternal genital apparatus and the ovum.' The author details two cases where the plan proposed was carried out with complete success. One of the patients, aged 23, sought the author's advice in the seventh month of her sixth pregnancy, the five previous pregnancies having been spontaneously interrupted either in the fourth month (two), or in the eighth (three, fœtus dead and foul). Another patient, aged 36, came under observation in the eighth month of her tenth pregnancy, her two first pregnancies having been spontaneously interrupted in the eighth month (fœtuses putrid), the next four, as well as the eighth and ninth, in the seventh month (fœtuses putrid); the seventh pregnancy reached full term, but the child was feeble, and lived only two hours. In neither of the cases could any distinct etiology be traced (still some slight suspicion about latent syphilis lingered in the author's mind). Iodide of potassium, in five-grain doses, three times a day, was administered to the patients, and was taken by them, with free intervals of several days after each seven days' course, up to the very labour, which in both of the cases came at full term, and for the first time presented the mothers, to their utmost satisfaction, with live and healthy children. In the case of the first patient, the next (seventh) pregnancy ran its normal course without any treatment.

4723. *Koppe on Cucaine in Dilatation of the Female Urethra after Simon's Method.*—In the *Meditz. Oboxr.*, 1885, Vol. xxiv., No. 15, p. 255, Dr. R. Koppe, of Moscow, describes the case of an anæmic, extremely nervous, and sensitive lady, aged 40, who presented symptoms of an obscure vesical tumour, and in whom, for the diagnostic purposes, he resolved upon dilatation of the urethra. Chloroform being contra-indicated, the author resorted to cucainisation of twenty minutes' duration, by means of introducing into the urethra a Playfair's sound with hygroscopic cotton-wool soaked in a 20 per cent. solution of hydrochlorate of cucaine. At the same time, the solution was applied, also, to the lower part of the anterior vaginal wall and to the urethral orifice. The application was renewed every five minutes. The diagnostic operation consisted in making three incisions (with scissors), from $\frac{1}{4}$ to $\frac{1}{2}$ centimètre in length, into the edge of the urethral orifice, and in dilating the urethra by means of Hegar's uterine dilatators (Nos. 10 to 18). Not the slightest pain or any other sensation was felt by the hyperæsthetic patient during the whole procedure. Thus, cucainisation proved here a brilliant substitute for chloroform narcotisation. As to the vesical tumour, it turned out to be 'adenoid.'

V. Idelson, M.D.

4724. *Imlach on a Case of Diabetes Mellitus cured by Removal of the Uterine Appendages.*—In the *Brit. Med. Jour.*, July 1885, p. 61, Dr. Imlach records a most interesting case of a widow, aged 31, who suffered from pyosalpinx. An operation was suggested, but it was discovered that the patient was suffering from diabetes mellitus, passing over 2,000 grains of sugar during the twenty-four hours. After three months' treatment under antidiabetic diet, the patient became so weak that an operation was decided upon. On May 19, 1885, the uterine appendages were removed. The right Fallopian tube was thickened in its walls, occluded at both ends, and distended with pus. The left tube was thickened, but not occluded at its fimbriated extremity, and contained only a little muco-pus. Both ovaries were so firmly adherent to the pelvis, that their removal was somewhat difficult. The fundus of the uterus, which was bound down by dense adhesions to the sacrum, was liberated. The patient recovered without a bad symptom. The quantity of sugar gradually diminished until May 26, when it finally disappeared. The patient returned to her home shortly afterwards, and lived on ordinary diet, without any return of diabetic symptoms.

4725. *Rae on a Case of Conception without the Reappearance of the Menstrual Flow.*—In the *Brit. Med. Jour.*, July 1885, p. 16, Mr. G. A. Rae records the following case. Mrs. S., aged 44, first menstruated at the age of 11, married when 19, and menstruated a fortnight later. Since that time she has never menstruated, but has always been able to draw off half-a-pint of milk from her breasts. She has had ten children born alive and well, also one at the eighth month, and four others at various times between the fourth and sixth months of gestation. Mr. Rae attended this patient in confinement on June 10, 1884; and in June 1885 she was again pregnant, being about three months advanced, and her breasts being as full as ever. [A reference to sect. 1,142 : 4 of the *Medical Digest* will show that such cases have been before noticed.—*Rep.*]

4726. *Duke on Avoidance of Rupture of the Perinæum.*—In the *Lancet*, July 1885, p. 99, Dr. A. Duke advocates dilatation of the perinæum, in primiparæ, by inserting two fingers into the vagina, and making traction upon the perinæum during pains. If necessary, the author adds, more than two fingers may be used during the later part of the second stage of labour. A great help to the patient is found in the plan of freely anointing both surfaces of the perinæum with lard, and applying hot fomentations, frequently changed, to the part.

RICHARD NEALE, M.D.

SYPHILOGRAPHY.

RECENT PAPERS:

4727. Horteloup.—On the Virulence of Buboes. (*Annales de Derm. et de Syph.*, No. 1, 1885.)

4728. Diday.—On Chancrous Bubo. (*Ibid.*)

4729. Stockquart.—The Treatment of Gonorrhœal Epididymitis. (*Ibid.*)

4730. Massaloux-Lamonnerie.—The Manifestations of Late Inherited Syphilis in the Eye. (*Thèse de Paris*, and *Annales de Derm. et de Syph.*, No. 1, 1885.)

4731. Capon.—On Syphilitic Retinitis, especially Perimacular Retinitis. (*Ibid.*)

4732. Pivaudran.—On Syphilis of the Tonsils. (*Ibid.*)

4733. Sallé.—Syphilitic Affections of the Lymphatic Glands and Vessels. (*Ibid.*)

4734. Pascalis.—On Syphilitic Epididymitis. (*Ibid.*)

4735. Basset.—On Subcutaneous Gummata. (*Ibid.*)

4736. Folliot.—On Gummy Periostitis of the Scapula. (*Ibid.*)

4737. Hermet.—The Manifestations of Inherited Syphilis on the Auditory Apparatus. (*Ibid.*, No. 3, 1885.)

4738. Gaudichier.—Syphilitic Phthisis: Recovery. (*Ibid.*)

4739. Hill, Berkeley.—Syphilitic Necrosis with Osteo-myelitis: Trephining: Removal of Sequestrum: Rapid Recovery under Antisyphilitic Treatment. (*Brit. Med. Jour.*, April 18, 1885.)

4740. Hill, Berkeley.—Ulceration of Large Gumma of Scrotum after an Injury: Margins Revived and Stitched Together: Cure. (*Ibid.*)

4741. Mannino.—Decoction of Lemons in the Treatment of Gonorrhœa. (*Annales de Derm. et de Syph.*, No. 4, 1885.)

4742. Pontoppidan.—When does Syphilis become a Constitutional Disease? (*Ibid.*)

4743. Neumann.—On Pigmentation of the Skin in Syphilis. (*Wiener Med. Blätter*, No. 14, 1885.)

4744. Syphilis in Hoofed Animals. (*Lancet*, May 2, 1885, p. 814.)

4745. Althaus.—Syphilitic Disease of the Brain. (*Ibid.*, May 9, p. 844.)

4746. Cooper, Arthur.—Tolerance and Advantage of Large Doses of Potassium Iodide. (*Ibid.*, p. 876.)

4747. Herzenstein.—Syphilis in Russia. (*Ibid.*, May 16, p. 910.)

4748. Macewen.—Monoplegia of Left Arm and Leg Due to Syphilis. (*Ibid.*, May 23, p. 934.)

4749. Pollard.—Thrombosis of Veins from Gonorrhœa. (*Ibid.*, May 30, p. 987.)

4750. Cooper, Arthur.—On Early Syphilitic Epididymitis. (*Brit. Med. Jour.*, May 30, p. 1094.)

4751. Perry.—Early Syphilitic Epididymitis. (*Brit. Med. Jour.*, July 25, 1885.)

4752. Hudson.—Treatment of Urethral Gleet. (*Lancet*, June 6, p. 1032.)

4753. Reyes.—Hæmoptysis in Syphilis. (*Ibid.*, p. 1050.)

4754. Zemschenko.—Cucaine in Snuffles. (*Ibid.*, June 13, p. 1097.)

4755. Dyson.—Hæmoglobinuria. (*Brit. Med. Jour.*, July 11, 1885.)

4756. Lucas.—On Gonorrhœal Rheumatism in Infants, the Result of Purulent Ophthalmia. (*Brit. Med. Jour.*, July 11, 1885.)

4757. Leuf.—On the Eradication of Syphilis During the First Stage by Surgical Means. (*New York Med. Jour.*, July 11, 1885, p. 36.)

4758. Baum.—Contribution to the Knowledge of Extragenital Initial Scleroses. (*Viertelj. für Derm. und Syph.*, Heft. i., 1885.)

4759. Horovitz.—On the Treatment of Gonorrhœal Hæmaturia. (*Ibid.*)

4760. Handford.—Syphilitic Induration of a Cicatrix resembling Morphœa. (*Lancet*, May, p. 1022.)

4761. Reyes.—Hæmoptysis in Syphilis.

4762. Lucas.—Gonorrhœal Rheumatism in Infants. (*Brit. Med. Jour.*, July, p. 57.)

4763. Smirnoff, A.—On the Treatment of Syphilis by Hypodermic Injections of Mercurial Salts. (*Voěnno-Sanit. Delo*, No. 14, 1885, p. 146.)

4764. Marenitch, S. T.—On the Use of Sculptor's Clay in Acute Epididymitis. (*Proceedings of the Vilna Med. Society*, 1885, No. 5, p. 11.)

Art. 4727. *Horteloup on the Virulence of Buboes.*—In the London Medical Record for June 1885 will be found an abstract of a paper by M. Straus, in which he denies the existence of *primarily* virulent bubo as a result of soft chancre, and asserts that such buboes only become virulent by inoculation after opening. In connection with the same subject, M. Horteloup, in a paper read before the Société de Chirurgie (*Annales de Derm. et de Syph.*, No. 1, 1885), maintains the older and generally accepted view of a virulent bubo, dependent on transference of the virus from the chancre to the gland by the lymphatic vessels. In support of this view, M. Horteloup adduces one case of his own, and seven recorded by Ricord, in his *Traité de l'Inoculation*, in which buboes became chancrous, although the chancre itself had healed before the bubo was opened. The author also relates full particulars of a carefully observed case of experimental inoculation, carried out in the Hôpital du Midi since the publication of M. Straus's paper. The following is a summary of the case. All due precautions having been taken to avoid fallacy, a bubo accompanying a soft chancre of the frænum was incised on Nov. 29, 1884, and the pus at once inoculated on the patient's abdomen, the skin having been previously cleansed with carbolic lotion. The inoculated spot was covered with a watch-glass, and the bubo was protected by a dressing of carbolic lotion and a bandage. Two days afterwards (December 1), the dressings were removed; the edges of the open bubo were loose but not ulcerated. The inoculation was unsuccessful. A second inoculation from the bubo was now made on the abdomen, and protected as before. On December 4, on removing the watch-glass, a pustule, which had already burst, and surrounded by an inflamed areola, was discovered at the site of the second inoculation. The pus from this was then reinoculated on the abdomen, and the pus from the bubo itself, which had by this time all the characters of a virulent (chancrous) bubo, was also inoculated for the third time. On December 6, the chancre produced by the inoculation of December 1 was more marked than before, and the reinoculation of its pus had produced a vesicle with an inflamed areola. The third inoculation from the bubo itself was also successful, and on December 8 the characters of all these inoculation-sores were those of soft chancres. This observation appears to M. Horteloup to prove conclusively that some of the buboes which accompany soft chancres are virulent before opening, for all possible precautions were taken as regards instruments, dressings, &c., to prevent accidental inoculation in this case. He considers that M. Straus must have met with an unusually happy series of cases, and that he has been too hasty in denying the existence of chancrous bubo, which does undoubtedly occur, though less frequently than might be supposed from certain statistics which have been published.

4728. *Diday on Chancrous (Chancrelleux) Bubo.*—In a note communicated to the Société de Chirurgie (*Ibid.*) M. Diday agrees with M. Horteloup in supporting the view of the occurrence of virulent bubo by absorption, and refers to his own case as one in point. M. Diday, many years ago, inoculated himself on the sheath of the penis with chancrous pus, the result being a chancre which subsequently became phagedænic, and was accompanied by a chancrous bubo. Neither M. Diday nor M. Horteloup denies that some virulent buboes are due to accidental inoculation of the open surface after opening, but both authors contend that such cases are exceptional. To those who consider them the rule, M. Diday puts the following questions. 1. The treatment of buboes of all kinds by blistering being so common, why do not those blistered surfaces become inoculated? 2. If a bubo after incision were inoculated from without, the chancrous erosion ought to start from the point touched by the pus, whereas the chancrous characters always show themselves simultaneously throughout the whole extent of the incision. 3. When the edges of an open bubo become chancrous, this transformation of a simple wound into a specific ulcer occurs always about the fifth or sixth day. Now, if this change were due to accidental inoculation of the wound, why does it never take place after the first week? 4. Besides buboes, of which one may predict that they will become chancrous, there are also strumous buboes, of which one may say with confidence that they will not become so. A patient with such a bubo has also a chancre (*chancrelle*). He is in a venereal hospital, exposed to all kinds of risks of accidental inoculation, yet the bubo that is strumous in its origin remains strumous to the end.

4729. *Stockquart on the Treatment of Gonorrhœal Epididymitis.*—The method of treatment advocated by M. Stockquart (*Annales de Derm. et de Syph.*, No. 1, 1885), and described by him as both 'easy and rapid,' consists in the application of mercurial plaster (*emplâtre de Vigo*) over the affected testis. Over the plaster a layer of cotton-wool is placed, and outside this a suspender of a size sufficient to exercise as much compression as can be borne. Short notes of six cases thus treated are given. The author states that confinement to bed was exceptional, and that, as a rule, the patients were soon able to resume their occupation, sometimes even to continue it all through.

4737. *Hermet on the Manifestations of Inherited Syphilis on the Ear.*—The two most characteristic lesions of the ear caused by inherited syphilis are, according to M. Hermet (*Annales de Derm. et de Syph.*, No. 3, 1885) 1. purulent inflammation of the middle ear, leading to the same local consequences as ordinary inflammation of the same parts, but differing from it in being painless; 2. a form of deafness which is very intense in degree, very sudden in its onset, and in which no appreciable lesion of the conducting apparatus may be discoverable. In a case of this latter kind which is related, deafness was said to have developed in four days, when the patient was 9 years old. M. Hermet remarks that deafness so sudden and intense could only be due to one of three causes; namely, hysteria, tabes, or inherited syphilis. Hysterical deafness comes on in adolescence or adult life, and its chief feature is its curability. The deafness of tabes is equally sudden as in the case of syphilis, and attains at least as high a degree of intensity. In the present case, however, the age of the child was against tabes; and at the age of 25, when she was seen by M. Hermet, there were no signs of tabes. The diagnosis of inherited syphilis was arrived at chiefly by the history of abortions and early deaths of other children, which was furnished by the patient's mother, who also affirmed that her first husband had spots on the penis at the time of her marriage, and that her second husband told her he had had syphilis in earlier life. The only satisfactory evidence of syphilis in the patient herself was the deafness, which was accompanied by an apparently healthy condition of the conducting parts of the ear. From this case M. Hermet draws two conclusions: 1. that in some cases an inherited syphilitic diathesis may be revealed by examination of the auditory apparatus alone; 2. that late inherited syphilis may manifest itself solely by disorder of hearing characterised by complete and absolute deafness of very sudden onset with integrity of the conducting apparatus. The exact cause of this kind of deafness is not yet known; but it appears to be due to neuritis of the auditory nerve. The affections of the ear mentioned above were the only two which had been observed by M. Hermet in the subjects of inherited syphilis up to the end of 1884, when he diagnosed an ulcerating syphilide of the external auditory canal in a child aged three years. Particulars of this case are given.

4738. *Gaudichier on a Case of Syphilitic Phthisis.*—M. Gaudichier reports the following case (*Annales de Derm. et de Syph.*, No. 3, 1885). A man, aged 39, was admitted into the Hôpital St. Louis, under the care of M. Fournier, on March 1, 1884. The patient said he had been wasting for two months, and that he had lately become so easily fatigued that he was unable to work. He had only had a cough for a few days, and had not suffered from night sweats or hæmoptysis. After admission, however, he spat a blood-stained muco-purulent fluid. At the left apex there were all the signs of a large and advanced cavity—cavernous breathing, gurgling, and cracked-pot sound on percussion. Over the right lung, the breathing was somewhat blowing in character, with subcrepitant râles. M. Fournier diagnosed tuberculosis of both lungs, but most advanced in the left. The left tibia was enlarged and irregular, and on the same leg were two gummy ulcers. There were also nodes on the right tibia and left clavicle. The discovery of these signs led to the administration of iodide of potassium in a daily dose of 60 grains. After two months' treatment, the signs of lung-mischief had almost disappeared, and the nodes had considerably diminished in size. Eleven months later, the patient was again seen. His general health was then excellent and the chest-lesions appeared to be completely cured. The patient, however, had only continued the iodide for a month after his discharge, and ulceration had reappeared on the left leg. Attention is directed to the fact that there were no physical chest-signs in this case, by which the diagnosis between tubercle and syphilis could be made. It was only by the effects of treatment that the true nature of the affection became evident.

4741. *Mannino on Decoction of Lemons in the Treatment of Gonorrhœa.*—Cut three ripe lemons, freshly gathered, into small pieces, and place them in an earthen vessel. Add 300 grammes of water, and expose to a gentle heat until reduced to 100 grammes. Press and separate the solid matter. The remaining liquid is to be used as an injection three or four times a day. The decoction ought to be freshly made, never more than two days old. This, according to Dr. Mannino, of Palermo, is the most effective destroyer of the 'gonococcus.' The treatment may be begun during the acute stage, and in a very few days the microbes are said to disappear and the urethritis to improve. M. Jullien, of Paris, in reporting Dr. Mannino's plan of treatment (*Annales de Derm. et de Syph.*, No. 4, 1885) states that he himself has used a somewhat similar injection—namely, a solution of citric acid, with success during the later stage of urethritis. The following is the formula suggested by M. Rebatel, and found by M. Jullien to be especially useful in cases of obstinate gleet. Citric acid 1·50, salicylic acid 0·05, water 250; to be injected twice a day. The salicylic acid is added merely for the purpose of making the solution keep better.

4742. *Pontoppidan—When does Syphilis become a Constitutional Disease?*—Dr. Pontoppidan, of Copenhagen, in discussing this question (*Annales de Derm. et de Syph.*, No. 4, 1885), begins by referring to the results of excision of indurated sores of late years. The cases of excision in which general syphilis has not manifested itself are proportionally so few, that they do not really invalidate the assertion of those who maintain that in the cases of apparent success syphilis would not have appeared in any case. But even the large number of cases in which excision has failed do not prove that the disease had become constitutional at the time of excision, but only that the virus had extended beyond the excised parts. The author then goes on to deal with the question of inoculation of the secretion of an indurated sore on the bearer of it. He thinks that in many cases such auto-inoculations are considered to have failed because, having been made for the most part simply with a view to the diagnosis between the local and the syphilitic sore, they have not been kept long enough under observation. In an extensive series of such auto-inoculations carried out by Dr. Pontoppidan during a period of several years, it was observed in certain cases that, although all traces of the inoculation might disappear in a few days, yet, if the case were watched for several weeks, spots or red papules appeared at the site of inoculation. Such papules sometimes disappeared when general symptoms of syphilis were developed. In other cases, when inoculation was practised early, the papules developed into typical indurations. Five cases are reported in detail to illustrate the above-named points; and from the results of his experiments in this direction, the author concludes that auto-inoculation, practised on the first appearance of a primary indurated sore—at a time, therefore, when the diagnosis may be still doubtful—gives rise, after an incubation-period of two or three weeks, to small red papules, which always appear before constitutional symptoms, and which, while growing to the size of a pea or a bean, develop an indurated base with ulceration or scaling of the surface. Resolution begins when constitutional syphilis manifests itself. Thus it appears that the organism may behave in certain cases under the influence of auto-inoculation, to a certain point at least, exactly like a healthy organism. The results of auto-inoculation thus produced are regarded by the author as regular initial scleroses, perhaps with a tendency to abortive resolution, because the constitutional infection which is developing at the same time is modifying the soil. Thus, although the negative results of early excision of primary sores appear to prove that infection has passed beyond their limits by the time induration has become manifest; yet such results of auto-inoculation as those obtained by the author render it probable that the whole organism does not become saturated with the virus until a later period of the so-called second incubation.

4743. *Neumann on Pigmentation of the Skin in Syphilis.*—Dr. Isidor Neumann states (*Wiener Med. Blätter*, 1885, No. 14) that, in pigmentation following syphilitic diseases of the skin, the pigment may be situated in exudation-cells, in the connective-tissue cells, or free in the necrobiotic tissue of the rete mucosum. The duration of the discoloration is variable. It may remain for a long time without undergoing any marked alteration, and this is especially the case when the pigmentation affects the periphery of the scars of syphilitic ulcers or pustules; or it may disappear after a longer or shorter period, as occurs mostly in the discoloration which follows macular, papular, and pustular syphilides. When the pigment persists for a long time, it is found chiefly in the connective-tissue corpuscles; when it disappears quickly, it is seated in the exudation cells, which are found mostly in the papillæ and in the adventitia of the blood-vessels, more seldom in the walls of hair-follicles, and the sebaceous and sweat glands. Neisser has divided abnormalities of pigmentation in syphilis into the following four groups: 1, pigment left behind by a bygone syphilide; 2, abnormal pigment-spots (syphilis pigmentosa); 3, syphilitic leucoderma, in which there is a loss of pigment from places previously occupied by a macular or papular syphilide; 4, loss of pigment arising from scars. As regards syphilitic leucoderma, Dr. Neumann thinks it is due to absence of pigment from the newly formed epidermis, which takes the place of that which has been shed from the surface of a syphilitic papule or macula. Hence arises a circumscribed white spot (vitiligo). In the cutis, however, and especially the papillary layer, there remain behind for some time (even eight to ten months, according to Riehl) yellow or brown pigmented cells, which lie partly between the connective-tissue cells, partly in the blood and lymph-vessels. Gradually, often only after a long period, the epidermis again receives pigment, and the normal colour returns, while the pigmented exudation cells, and also the pigmented connective-tissue cells in the corium, partially undergo resorption.

4749. *Pollard on Thrombosis of Veins from Gonorrhœa.*—At a meeting of the Pathological Society, on May 19, Mr. Bilton Pollard showed a dissected specimen of the pelvic viscera and veins of a case of thrombosis consequent on gonorrhœa (*Lancet*, May 30, 1885). The patient was a woman, aged 19, who had suffered from gonorrhœa for thirty-six days. The other symptoms were pyrexia, the temperature ranging between 100° and 102°, pain in the knee, and fixation of the right hip-joint. Death was due to embolism of the pulmonary arteries. The specimen showed thrombosis of the left common iliac, left internal iliac, and vaginal veins. There was no ulceration of the vagina. The cartilage of the femur and acetabulum on the right side was eroded, and the joint contained purulent material. No other joints were affected. Mr. Pollard thought the case remarkable, in that such serious conditions should complicate a case of gonorrhœa without giving rise to symptoms sufficient to call attention to the perilous state of the patient.

4750. *Cooper on Early Syphilitic Epididymitis.*—In this paper (*Brit. Med. Jour.*, May 30, 1885) Mr. Arthur Cooper gives a sketch of the history and characteristics of this rare affection, described by Dron in 1863, and relates particulars of the case of a patient, aged 21, in whom the epididymis on both sides became enlarged about two and a half months after the appearance of the initial lesion. There was no urethritis or ascertainable cause other than syphilis. On the left side, the swelling involved the whole globus major, the bulk being about equal to that of a quarter of a Tangerine orange; on the right side. the swelling was only about half the size of the left. The body and tail of each epididymis, the testes themselves, the spermatic cords, and the scrotum, were normal. The enlargement coincided with other signs of active syphilitic growth on the skin and tongue. They all appeared while the patient was taking mercury, but quickly subsided under a combination of iodide of potassium and corrosive sublimate.

4751. *Perry on Early Syphilitic Epididymitis.*—Mr. Allan Perry reports from Gibraltar (*Brit. Med. Jour.*, July 25, 1885) the case of a syphilitic soldier, aged 20, who complained of slight pain in the left testicle two months after the initial lesion had been noticed. On examination the testis itself was healthy, but the globus major was enlarged, slightly painful, and quite hard; it felt as if a 'monkey-nut' had been inserted. The cord was healthy. There was no urethral discharge, nor had the patient met with any accident. The right organ was healthy. Coincidently with the affection of the epididymis, ulcers appeared on the tonsils. After a week's treatment by mercury the swelling was decidedly less, and in a fortnight the epididymis had become normal.

4752. *Hudson on the Treatment of Gleet by Medicated Metal Bougies.*—The following is the plan of treatment recommended by Dr. T. J. Hudson (*Lancet*, June 6, 1885), when an urethral discharge has lasted beyond ten or twelve weeks. A No. 4 Brodie's solid bulbous metal bougie, anointed with carbolic oil (1 in 20) is passed into the empty bladder. If this procedure prove easy, and do not cause much spasm or pain, the instrument is kept in ten minutes, and the patient told not to urinate for some hours after. Unless much irritation or scalding result, in four days' time a No. 6 bougie, anointed with iodoform and resin ointment (2 drs. to the oz.), is passed, and at once changed for a No. 8 or 10, which is kept in twenty minutes. In another four days No. 12 and No. 14 are passed, the latter being kept in half an hour. If, after a week's interval, great improvement does not result, the same size is passed, covered with iodide of sulphur ointment diluted one-half with benzoated lard, and kept in from half an hour to two hours. In some of the most chronic and yet successful cases the instrument was kept in from four to five hours at a stretch. The author states that of over eighty cases treated in this way more than fifty were cured, many being of several years' duration. The remainder either passed out of sight or had also drugs by the mouth. The ages ranged from 17 to 40 years. No bad results followed beyond epididymitis in one case, and at times slight incontinence. A suspensory bandage was ordered to be worn throughout the treatment, but rarely abstinence from stimulants other than spirits. The average duration of treatment was four to five weeks.

4755. *Dyson on Hæmoglobinuria in a Syphilitic Subject.*—The patient in this case (*Brit. Med. Jour.*, July 11, 1885) was a bricklayer, aged 30. He had a chancre nine years ago, an ulcerating node three years ago, and a large sternal node last October. For the latter he came under treatment at the Sheffield Public Hospital, and at the same time stated that he had shivering attacks and passed bloody urine. The attacks presented the usual characteristics of the disease; they were excited by cold and exposure; the symptoms were rigor, rise in temperature to 104° F., followed by sweating. The urine passed after the rigor was of a dark port-wine or pitch-black colour, contained much albumen, methæmoglobulin, granular *débris*, granular nucleated cells, casts, and oxalates in abundance. The albumen and hæmoglobulin were twice noted to appear and disappear at the same time. There was no icterus during or after the attacks. The patient had suffered from the disease for about a year, and there was nothing of the kind in his family. There was no urticaria or gastro-hepatic disturbance. Iodide of potassium (which speedily cured his node), quinine, and iron, did not prevent the attacks. But after mercury was given, the patient had only one modified attack, and they ceased altogether after the drug had been taken eight days. Four months had elapsed since the last attack. The patient was working hard and under great exposure.

4758. *Baum on Extragenital Initial Lesions.*—Dr. Baum has collected from the clinic of Professor Pick, in Prague, eighteen cases of syphilis in which the initial lesion was situated elsewhere than on the genital organs (*Viertelj. für Derm. und Syph.*, No. 1, 1885); namely, on the lower lip in six cases, on the upper lip in two cases, at the inner angle of the left eye in one case, on the cheek in one case, on the chin in two cases, on one breast in three cases, on both nipples in two cases, and on the mons Veneris in one case. The author reports the cases in full, and concludes with some remarks on the origin, symptoms, and diagnosis of syphilis where the initial lesion occurs in an unusual position.

4759. *Horovitz on the Treatment of Gonorrhœal Hæmaturia.*—Dr. Horovitz remarks (*Viertelj. für Derm. und Syph.*, Heft 1, 1885) that acute or subacute gonorrhœa in the male is not infrequently complicated by hæmaturia. Thus in 70 cases which came to the venereal department of Professor Auspitz's clinic in Vienna during three months there were seven of hæmaturia. For cases in which the blood comes from the posterior part of the urethra or neck of the bladder, when the ordinary means fail the author recommends the passage of a Nélaton's soft catheter, No. 6 or No. 7 in size, and its retention for 24 or 48 hours, the former period being usually long enough. As hæmorrhage of a kind requiring such treatment does not come on as a rule until the end of the third week, the sensitiveness of the urethra has to some extent subsided, and the author has found that the catheter can be borne without much inconvenience. As regards the objection that the presence of the instrument might set up cystitis, Dr. Horovitz is of opinion that such a complication cannot happen if a smooth, properly cleansed, and aseptic instrument be employed. The author states that he has adopted this plan of treatment in several cases with success, and that no disagreeable after-effects have ever followed its employment.

ARTHUR COOPER.

4760. *Handford on Syphilitic Induration of a Cicatrix Resembling Morphœa.*—In the *Lancet*, May 1885, p. 1022, Dr. H. Handford relates the case of a man who had the left arm injured by cogwheels. About a month after the wounds had completely healed, the cicatrix became indurated and more than half an inch in thickness, closely resembling morphœa. It was discovered that the patient was only just recovering from a hard chancre. Antisyphilitic treatment was at once commenced, and the induration began to disappear. After some weeks the cicatrix became soft and normal in appearance.

4761. *Reyes on Hæmoptysis in Syphilis.*—In a Cuban medical journal, Dr. Reyes records some cases of hæmoptysis during the second stage of syphilis, in patients treated by the green iodide of mercury. In one case, the hæmoptysis disappeared when the iodide was stopped, and recurred each time this drug was recommenced. Dr. Reyes suggests that in some persons this drug produces a fatty degeneration of the capillaries of the respiratory passages, thus giving rise to rupture and hæmorrhage.

4762. *Lucas on Gonorrhœal Rheumatism.*—In the *Brit. Med. Jour.*, July 1885, p. 57, Mr. Clement Lucas publishes an interesting case of gonorrhœal rheumatism in an infant, following purulent ophthalmia. A woman, aged 34, who had never suffered from any signs of syphilis, and who had given birth to several healthy children, noticed that she was suffering from a thick purulent discharge, which had been communicated by her husband. Three weeks afterwards she was confined, and in a day or two the child was noticed to have a purulent discharge from the eyes, which was treated by alum lotion. A fortnight later, whilst the discharge from the conjunctiva was still profuse, the child's left knee became enlarged and painful; a little later the left hand was observed to drop, and movement of the left wrist gave the child pain. On examination, the left knee-joint was found to be much distended, and to contain a considerable quantity of fluid, being sufficiently red to suggest a possible tendency towards suppuration. The left wrist was also enlarged, but there was no redness. The only treatment adopted was to apply a simple lead lotion to the swollen joints, and to bathe the eyes with a strong solution of alum (8 grains to ℥j.). In about four weeks the eyes became well, and a fortnight later the joints could be freely moved without causing any pain. The author is of opinion that this case was one of gonorrhœal rheumatism, due to gonorrhœal ophthalmia. Some authorities have questioned this diagnosis, and suggest that syphilis was the cause of the joint-trouble, but Mr. Lucas found no evidence whatever of syphilis in the parents nor in the child itself. A few interesting remarks are made upon the subject of gonorrhœal rheumatism in young adults. There are two forms of this affection. 1. A subacute form attacks a few joints only; those attacked are much swollen, but give little pain unless moved. Males and females are both liable to this form, but it is often overlooked in young servant girls, and the swollen joint is attributed to some other cause. 2. The other form is an acute arthritis, accompanied with high fever, acute pain, redness, and swelling. Mr. Davies-Colley has drawn attention to this form; the treatment necessary is rest and evaporating lotions. Though suppuration threatens, it very rarely takes place in these cases. The author adds that, in the case narrated, the inflammation of the knee-joint resembled the acute form first mentioned, but he has no doubt that the subacute form may be found after cases of purulent ophthalmia, and advises observers to bear in mind the fact.

RICHARD NEALE, M.D.

4763. *Smirnoff on the Hypodermic Injection of Mercurial Salts in Syphilis.*—In the *Voënno-Sanit. Delo*, No. 14, 1885, p. 146, Dr. A. Smirnoff, of Soroky, Bessarabian Government, writes that he treated ten cases of syphilis by subcutaneous injections of the following solution: Corrosive sublimate, 4 grains; chloride of sodium, 20 grains; distilled water, 1 ounce. From one-sixth to a quarter of a grain of sublimate was administered at a time. The average number of the injections in an individual case was 22·9, the maximum 32, and the minimum 13. They caused strong burning pain, prolonged induration of the subcutaneous cellular tissue, and sometimes (in two cases) suppuration with sloughing of the skin. Salivation and stomatitis were absent. In view of the pain caused by the solution, the author discontinued it; and in the next seven cases tried this: Bicyanide of mercury, 5 grains; distilled water, half an ounce. He injected half a grain of the salt at a time; the average number of the injections in an individual case being 21·4, the maximum 35, the minimum 13. He asserts that the bicyanide injection causes but slight pain and no induration. Several patients, after six or eight injections, complained of itching in the groin, the latter being slightly swollen and red; however, the phenomena disappeared spontaneously while the treatment was going on, and stomatitis or salivation never made their appearance. After ten or twelve injections, all syphilitic manifestations on the skin and mucous membranes (and sometimes iritis) were effaced, and then the resolution of the lymphatic swellings rapidly followed. [In the *Vratch*, No. 21, 1881, p. 339, Dr. L. M. Letnik, of the Odessa Town Hospital, reports on 210 cases of syphilis successfully treated by him with hypodermic injections of corrosive sublimate: ℞ Hydr. bichlor. corr., 6 grains; natri (sodii) chlor., ʒss.; aquæ destill., ℥ij. + ʒij. M. One-sixth of a grain of the salt at a time. The number of injections in an individual case varied between twenty and forty-five. According to Dr. Letnik's comparative experiments, the solution of sublimate with chloride of sodium as given above causes less severe pain than a solution of sublimate united with morphia, or than solutions of bicyanide of mercury. Again, the induration from sublimate disappears in five or six days, while that from the bicyanide remains longer than twenty days. See also Afonsky's paper on the same subject, in the LONDON MEDICAL RECORD, Feb. 1883, p. 58.—*Rep.*]

4764. *Marenitch on the Clay Treatment of Epididymitis.*—Dr. S. T. Marenitch records (*Proceedings of the Vilna Med. Society*, 1885, No. 5, p. 11) a case of acute gonorrhœal epididymitis, in which the use of Frick's bandage caused agonising pain, burning, and increase of swelling of the testis, as well as constipation, hiccough, and vomiting. The removal of the bandage, which had been too tightly applied, relieved the general symptoms. On a subsequent application of cakes of sculptor's clay, pain, swelling, and inflammation rapidly disappeared. [The clay treatment of orchitis gave most satisfactory results, also, in the hands of Drs. Lukashevitch and Berg; *see* the LONDON MEDICAL RECORD, Nov. 1884, p. 492, and May 1885, p. 192.—*Rep.*]

V. IDELSON, M.D.

PATHOLOGY.

RECENT PAPERS.

4765. UGHETTI, G. B.—On Regeneration of the Liver. (*Riforma Medica*, May 1885.)

4766. ALBERTONI AND G. PISENTI.—On the Pathogenesis of the Renal Alterations in Diabetes. (*La Medicina Contemp.*, June 1885.)

4767. SEMMOLA, PROF. M.—New Researches, Experimental and Clinical, on Bright's Disease. Part iii. (*La Medicina Contemp.*, June 1885.)

4768. LEGG.—Addison's Disease without Tubercular Degeneration of the Suprarenal Capsules. (*Lancet*, June, p. 1927.)

4769. GLOVER.—Obliteration of one Lung with Displacement of the Heart. (*Lancet*, June, p. 1048.)

4770. TSCHERNING.—A Case of Inoculated Tuberculosis. (*Centralbl. für die Klin. Med.*, June 20.)

ART. 4765. *Ughetti on Regeneration of the Liver.*—Recent authorities differ as to the mode in which repair takes place after traumatic lesions of the liver. Colucci believed that a true regeneration of the hepatic tissue might take place by transformation of the leucocytes into hepatic cells. Tizzoni and Corona found that the new hepatic cells proceeded from the hepatic cells belonging to the remaining part of the gland. Griffini attributes the principal part in regeneration to proliferation of the epithelium of the biliary canaliculi. Although the researches of these observers placed beyond doubt that a regeneration of hepatic tissue really takes place, these researches were limited to the periphery of the organ; in their numerous experiments, pieces of various size and form were always removed from the edge of the liver. Professor Ughetti has undertaken a series of experiments to study the method of repair of solutions of continuity in the interior of the organ, as more directly connected with cases of special pathology. In certain dogs and rabbits he succeeded in causing lesion, more or less grave, limited to the interior of the gland. The animals were then killed at different intervals of time. He found that when the internal lesion was great, and especially when it communicated freely with the exterior of the organ, regeneration of the gland substance took place by proliferation of the hepatic cells. When the lesion was not great, and not in communication directly with the peritoneal surface, regeneration as a rule was not observed. Purely cicatricial repairs then occurred by means of the interacinous connective tissue. In these cases no multiplication of hepatic cells was seen; on the contrary, those nearest the new-formed connective tissue were in a state of atrophy due to rapid compression.

4766. *Albertoni and Pisenti on the Pathogenesis of the Renal Alterations in Diabetes.*—The authors find experimentally that, when acetone is given for any time, albuminuria results, and this when only small doses, 2 cubic centimètres of acetone in 10 of water, are given, as well as with large doses (5 to 6 cubic centimètres. Certain well-marked changes are found in the kidneys, depending more on the time for which the acetone has been given than on the quantity administered. These changes affect chiefly the cortical substance, and especially the convoluted tubules as they leave the capsule of Bowman, while they are not observed in the ascending and descending portions of the loops of Henle; the straight tubules also are unaffected. The epithelium of the convoluted tubules becomes granular, and finally necrosed and destroyed. The epithelial remains may be seen as cylinders in the tubules, and are then passed in the urine, as casts. The Malpighian glomeruli are never affected. These alterations produced by acetone assume great importance, from the fact that acetone is found in the urine in diabetes and febrile diseases. The lesions described by Ebstein, as found in individuals dying from diabetic coma, and in whose urine acetone had been for some time present, are identical. The development, then, of an acetonic nephritis and albuminuria is possible in cases in which acetone is eliminated persistently in the urine. The renal alterations are due to the elimination of unaltered acetone; the acetone is not filtered through the glomeruli, but, like urea, is separated and secreted by the epithelium of the convoluted tubules. Ebstein has shown the importance of nephritis in diabetes, as a cause of fatal coma. It is possible that the poisonous effect of acetone may have been exaggerated, but its power to cause renal lesions, and so to lead indirectly to a fatal conclusion, must not be ignored.

4767. *Semmola on Bright's Disease.*—Semmola's researches prove that albumen can pass through the renal filter without the existence of previous alterations of the histological elements of the kidneys, and without leaving consequences from its passage. If the passage of albumen persists, the first effect is hyperæmia with intraglomerular and intratubular hæmorrhages. After boiling the kidney, Bowman's capsules are found distended by a mass of coagulated albumen. Sometimes they are simply raised, and appear separated from the glomeruli by an empty space. A considerable emigration of leucocytes is observed, without alteration of the epithelium. Hyaline cylinders are found in the urine. These alterations are the first stages of an inflammatory process in relation with the functional effort. If the functional effort be prolonged beyond eight or ten days, and especially when albumen is injected to the amount of 1 gramme to every 1,000 grammes of the animal's weight, progressive signs of a slow inflammatory process are obtained, with swelling and turbidity of the epithelium of the tubules, fatty degeneration, epithelial necrosis, and thickening of the intertubular connective tissue. This proves that the functional effort which the kidney sustains for the slow and prolonged elimination of unassimilable albumen is apt to provoke an inflammatory process successively in the different parts of the organ, beginning with simple hyperæmia, and perhaps proceeding to the commencement of interstitial nephritis. In all probability, and the author is making experiments to demonstrate it, if smaller quantities of albumen were injected, the animal being kept alive for seven or eight months, the last stage of the large white kidney, that is the atrophic kidney, would be obtained. The histological alterations in the kidney persist for some time after the injections of albumen are discontinued, and that without producing continuation of the albuminuria. Concurrently with the elimination of albumen in the urine 'albuminocholia' is always observed; that is, the elimination of a certain quantity of albumen with the bile. G. D'Arcy Adams, M.D.

4768. *Legg on Addison's Disease without Tubercular Degeneration of the Suprarenal Capsules.*—In the *Lancet*, June 1885, p. 1027, Dr. Wickham Legg contributes an article on the subject of Addison's disease without tubercular disease of the suprarenal capsules. The author relates the case of a woman, aged 29, who was quite well up to December 1883, when she began to complain of shortness of breath, with giddiness and vomiting. A month later the skin became discoloured, patches of pigment being noticed in several parts. The patient gradually grew worse, and had two or three paroxysms of fever during May 1884. On June 7 the temperature was again raised, and continued above normal until June 11, when she died; the highest point reached was 102°·8 F. On *post mortem* examination, the body was found wasted, and there was much dark-brown pigment in the skin. Nothing abnormal was discovered in the spinal cord, brain, or ears. The lungs were quite natural; the heart was small, weight 6¾ ounces; the muscular tissue brownish; valves natural. The right suprarenal capsule was represented by a small shred of tissue, quadrangular in shape, about half an inch long by a quarter broad. The left was black, of natural outline but completely wasted, and as thin as paper. The solar plexus was quite natural to the naked eye. The author adds that, if we are obliged to give up the theory of the necessity of tubercular degeneration of the suprarenal capsules to Addison's disease, he has no other to put in its place.

4769. *Glover on Obliteration of one Lung, with Displacement of the Heart.*—In the *Lancet*, June 1885, p. 1048, the following case is reported by Dr. Glover. A man, aged 63, was known to have suffered for thirty-five years from complete displacement of the heart. At the necropsy another remarkable lesion was discovered; viz., almost complete absence of the right lung, which was reduced to a hard shrivelled substance, in shape something like a sausage. On being cut into, this was found to consist almost entirely of thickened pleura, which was at points half an inch thick. The left lung was correspondingly large. No history of pleurisy could be traced during the patient's life, and no history of consumption in that of his family. He had always been weak and slight, and his mother had always noticed 'a beating on the wrong side.' He died in the workhouse, from broncho-pneumonia.

Richard Neale, M.D.

4770. *Tscherning on Inoculated Tuberculosis.*—The *Centralbl. für Klin. Med.* of June 20 contains the report by Dr. Tscherning of a very interesting case of inoculated tuberculosis. A woman, aged 24, was wounded on the first phalanx of the middle finger, by a fragment of a broken vessel which had contained sputa rich in tubercular bacilli. Fourteen days later, a whitlow appeared on the finger, not leading to suppuration, but giving rise to a small swelling, of the size of a pea, between the skin and the sheath of the tendons, which was removed. The wound healed, but a few months later the finger was again œdematous, the sheath of the tendons swollen, and the power of movement diminished. The finger was removed at the metacarpo-pharyngeal joint, along with two enlarged cubital and axillary glands, and the tendons as far as the middle of the palm. The tissues removed were filled with miliary tubercle, partly caseous, and giving distinct evidence of the presence of bacilli. Two months later, the patient appeared to be perfectly recovered, with no chest-symptoms, and no sign of extension of the disease. Alice Ker, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

4771. Kazem-Bek.—On a Case of Poisoning by Benzine. (*Dnevnik Kazanskaho Obshtchestva Vratchëy*, No. 10, 1885, pp. 146-50.)

4772. Filippi.—Is Fuchsin a Poison? (*Riv. Sper. di Fren. e di Med. Leg.*, Anno. x., Fasc. iv.)

4773. Tamassia.—Cadaveric Rigidity and the Temperature of the Body. (*Ibid.*)

4774. Badaloni.—A Case of Anomalous Conformation of the Male Genital Organs in Relation with Legal Medicine. (*Gazzetta degli Ospitali*, July 29, 1885.)

4775. Marie.—Spinal Symptoms of Lathyrism and Ergotism. (*Archiv. Ital. per le Malattie Nervose*, Fasc. ii., 1885.)

Art. 4771. *Kazem-Bek on a Case of Poisoning by Benzine.*—At a recent meeting of the Kazan Medical Society, Dr. A. N. Kazem-Bek communicated (*Dnevnik Kazanskaho Obshtchestva Vratchëy*, No. 10, 1885) a very rare fatal case of benzine poisoning. The case was that of a retired soldier, an habitual excessive drunkard, who had mistaken benzine for *vodka* (aqua vitæ), and drank three drachms of the fluid. Though sober at the time, the patient did not discover his mistake, since he had absolute loss of smell and taste (as may be seen from the fact of his having taken with relish several glassfuls of an infusion of horse excrements, which his relatives had given him as *vodka* on several occasions, with curative aims in view). In about ten or fifteen minutes, the patient lost consciousness. Two hours later the author found him in a comatose state, with reactionless, slightly dilated pupils, insensible cornea, general anæsthesia, trismus, irregular, stertorous breathing, hardly perceptible pulse, coldness of the body, paralysis of all four limbs, great distension of the belly. Later on, myosis of an extreme degree (as if from opium) appeared. The patient died in a comatose state about 17½ hours after the ingestion of the poison. The exhalation of benzine by the lungs was so intense as to produce extreme giddiness in the author (after four hours' stay with the patient), and nausea with vomiting in the patient's brother. On the *post mortem* examination, there were found congestion of the meninges, sinuses, and the ependyma of the ventricles; accumulation of serous fluid under the pia mater and in the ventricles; congestion of the pharyngeal, laryngeal, and tracheal mucous membranes, and of the lungs; about an ounce of dark fluid in the right cardiac ventricle; chronic catarrhal changes in the mucous membrane of the œsophagus, stomach, and intestines; finally, an odour of benzine in all the organs and cavities of the body. The author concluded that death was caused by asphyxia. While pointing to the absence of any characteristic lesions, he expresses his belief that the specific odour which permeates the whole body is the single criterion for recognising a case as that of benzine poisoning.

V. Idelson, M.D.

4772. *Filippi on Fuchsin.*—The question whether fuchsin is a harmless colouring for wine came before the Italian Courts of Justice last year. A wine-merchant was sentenced to a heavy punishment, for having added fuchsin as a colouring matter in the proportion of 5 or 6 centigrammes to the litre of wine. The Court of Appeal at Florence confirmed the sentence. And now Professor Filippi, who was a witness for the defence, writes a long, learned, and able paper to show that fuchsin is absolutely innocuous when pure; and that, in fact, if one happened to have albuminuria, fuchsin might do good. Even if the fuchsin were not pure, but contained arsenic, the quantity of arsenic would be so small as to be harmless. He calculates that, as a rule, a man drinks at the outside about 2 or 2½ litres of wine a day, and would therefore take only about 10 centigrammes of fuchsin a day. This quantity is regarded as extremely innocent, in view of the fact that daily doses of from 50 to 100 centigrammes have been repeatedly taken without any ill effect. Rabbits were submitted to doses of 50 centigrammes for fifteen days without any detriment to health, and the author himself took doses increasing from 5 to 45 centigrammes for ten days, without any disturbance of health except a slight red coloration of the urine. A great many authorities and experiments are also quoted to show that fuchsin is altogether innocuous. In spite of all this, however, the Court of Appeal made absolute the punishment of the wine-merchant who had practised the deception of colouring his wines in so scientific a manner.

4773. *Tamassia on the Relationship between Cadaveric Rigidity and the Temperature of the Body.*—From experiments on dogs, rabbits, and guinea-pigs, Professor Tamassia draws the following conclusions. 1. Extremely low temperatures (−10° C., *i.e.* 14° F.), and extremely high temperatures (about 75° C., *i.e.* 167° F.), provoke cadaveric rigidity almost instantaneously. 2. The occurrence of rigidity is hastened to a remarkable extent by temperatures between 0° and 2° C. (32° and 36° F.), and by temperatures between 44° and 60° C. (111° to 140° F.). 3. Temperatures of 5° C. (40° F.), and of 30° to 32° C. (86°–89° F., nearly), hasten rigidity and with equal energy. 4. Rigidity occurs slowest in temperatures varying from 13° to 15° C. (55° to 58°·5 F.). Animals that die of hæmorrhage do not in any way differ from others in regard to cadaveric rigidity.

4774. *Badaloni on a Case of Malformation of the Male Genital Organs in Relation with Legal Medicine.*—The case related by the author is remarkable from a forensic point of view. Faustina Maura, 51 years of age, was brought up as a girl, no doubt as to her sex having been entertained. When 21, she married. Her husband finding coitus impossible, determined to stretch the parts himself, and with a small knife he prolonged downwards for about a centimètre the fissure of what he believed to be the vulva. Notwithstanding this, penetration was still impossible. Meanwhile, Faustina observed during these attempts the erection of an organ which by its increase in volume put an end to further manœuvres. At length the conviction seized her that she would get on better with a woman. The obliging wife of a neighbour allowed her to try the experiment, which was successful. The function for which she was fitted by nature being thus cleared up, she and her husband, by common accord, agreed to separate. This happened only after ten long years of matrimony. The circumstances ultimately became known, and the Pontifical Government desired to know whether Faustina was a male or a hermaphrodite; and, with this view, proceedings were commenced in the Roman Courts, which, however, came to an end with the Papal Government in 1870. After this she lived with a married brother, who was acquainted with the state of the case. She still dressed and worked for her bread as a woman. Her brother ill-treated her, and she ended by threatening to claim the share of inheritance to which, if a male, she was entitled. Blows followed words, and the brother drove her from the house, after having badly hurt her arm. This was in February 1884. The brother, when prosecuted for assault, to excuse himself, charged the pretended sister with the seduction of his wife. Dr. Badaloni was accordingly requested by the Tribunal to examine Faustina Maura. Though dressed in woman's clothes, this person had the aspect of a man. The figure and the bony frame were also of the male type. The face was shaven. The genital organs at first sight appeared to present the *mons Veneris*, and the external labia of a woman with a large clitoris. A sulcus extended from the anterior part of this seeming clitoris to the base, and thence to within 3 or 4 centimètres of the anus, where it was transformed into a circular funnel-shaped opening, which admitted a finger for about 4 centimètres. A closer examination showed that the apparent external labia were formed by the halves of the divided scrotum; each labium containing a normal testicle. The penis was 4½ centimètres long in the flaccid state, and was said to be 9 centimètres when erect. The fissure was formed by the urethral canal, which was complete only as far as the root of the penis, being entirely divided from that point forward. In accordance with the medical evidence, Faustina Maura was found, at the ripe age of 51, to be not a woman but a man; and the Court awarded him its gratuitous protection for the establishment of his legal rights.

William R. Huggard, M.D.

4775. *Marie on Spinal Symptoms of Lathyrism and Ergotism.*—The author first reviews the interesting work of Tuczek on the spinal phenomena and the morbid alterations found in seventeen cases of ergotism; he then passes to the study of lathyrism, of which several epidemics have been observed in the last few years, and which is caused by the consumption of the vetch which is cultivated in great quantity in the central and southern parts of France, Italy, and Algeria. The vetches belong to the family of Leguminosæ, and of many varieties the *Lathyrus sativus* and *Lathyrus cicera* are most widely diffused. Lathyrism has been long recognised in Italy. In 1691, Ramazzini analysed it in the Duchy of Modena; Targioni Tozzetti in 1784 in Tuscany; but to Cantani (1873) we owe the first exact clinical description of the disease and its name of lathyrism. He found the following symptoms in three brothers, who for some time had lived on the flour from the seeds of the *Lathyrus Climenum*: progressive weakness of the lower limbs, and more especially of the flexor muscles; spasmodic gait; diminution of galvanic and faradic contractility, sensation and cutaneous reflexes being unaltered. In 1881 Brunelli communicated to the International Medical Congress held in London, the history of four men and one woman suffering from lathyrism, who presented the characteristic symptoms of tabes dorsalis spasmodica; there was exaggeration of knee and ankle reflexes. Two further observations of lathyrism were published in 1882 by Gorgieri, of Parma (*see* LONDON MEDICAL RECORD, Oct. 1883); he also found spasmodic muscular phenomena and exaggeration of the tendon reflexes. At the beginning of 1882 there was an epidemic of lathyrism in the Kabylia, which Bourlier describes in the *Alger Médical* for Sept. 1882. The affection showed itself after a rainy wet season. The first four or five days the patients complained of general tremor, pain round the waist, diminution of cutaneous reflexes, exaggeration of tendon-reflexes, hyperæsthesia and then anæsthesia of the legs, with uncertain gait; persistence of muscular contraction after electric excitement. As to the lesions which cause the morbid symptoms, Bourlier thinks that there is a functional disturbance of the posterior columns, of the posterior grey columns, and of a part of the lateral columns from the action of the poison on the lower part of the spinal cord. More in consonance with the facts observed is the opinion of Brunelli, who holds that the morbid process in lathyrism is analogous to that of tabes dorsalis spasmodica, and resides in the lateral columns. Marie made a series of researches on the action of lathyrism in animals. In the seeds of the lathyrus he found and was able to isolate an alkaloid; but hypodermic injections in guinea-pigs gave no result. The opinions of authors on the genesis of lathyrism may be reduced to three; some admit that morbid phenomena are due to the special action of the lathyrus, or at least of some varieties; others hold that the disease is due not to the lathyrus, but to the ingestion of other seeds, as of the ervum ervilia; others again attribute the symptoms to lathyrus seeds spoilt by damp and fermentation, or affected by some disease analogous to the secale cornutum. This last opinion has no foundation in fact; thus Cantani, having occasion to examine the seeds of the lathyrus coming from places where the epidemic prevailed, found them intact.

G. D'ARCY ADAMS, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

4776. KOVALEVSKY, P. J.—Concerning the Function of the Nucleus Caudatus. (*Arkhiv Psikhiatrïi, &c.*, 1884, Vol. iv., Part 3, pp. 138–40.)

4777. JOHNSON.—The So-called Dentist's Leg. (*Lancet*, August, p. 282.)

4778. SUTHERLAND.—The True First Stage of General Paralysis. (*Lancet*, August, p. 339.)

4779. HOFFMANN. — Injury to the Radial Nerve cured by Suture and Electricity. (*Deutsche Med. Wochensch.*, July 2.)

ART. 4776. *Kovalevsky on the Function of the Nucleus Caudatus.*—In the *Arkhiv Psikhiatrïi, &c.*, vol. iv., Part 3, 1884, p. 138, Professor P. J. Kovalevsky, of Kharkov, discusses the contradictory statements of physiologists and anatomists as regards the significance of the nucleus caudatus, and relates a case which seems to show that this part of the striated body does not stand in any connection with the motor function of the brain (and which, therefore, may be taken as a new evidence in support of the opinions of Mayor, Fürstner, Smith, Pitres, Minor, Glikï, &c.). The patient, a soldier's wife, aged 57, never in her life suffered from any paralytic or paretic symptoms. She was admitted to the hospital (eighteen days before her death) with senile marasmus, generalised arterio-sclerosis, pulmonary emphysema, and mitral insufficiency. On the *post mortem* examination there was found a greyish-white, firmish, circular cicatricial patch of the size of a fourpenny piece, and about $\frac{3}{7}$ centimètre in thickness, which was strictly limited to the region of the caudate nucleus. It consisted of young connective-tissue fibres with scattered pigment-granules, nerve-elements being absent. All other parts of the striated body, as well as the remaining parts of the brain, were quite healthy.

V. IDELSON, M.D.

4777. *Johnson on So-called 'Dentist's Leg.'*—In the *Lancet*, Aug. 1885, p. 282, Dr. George Johnson contributes an article on the Etiology and Pathology of the so-called 'Dentist's Leg.' The author suggests that the sensations giving rise to this term are not due to 'nervous exhaustion,' but to perverted nerve-function, directly due to a mechanical impediment to the circulation through the rigidly contracted muscles and their associated nerves. The obvious means of prevention and of cure consists in rest for the overstrained limb, or such a frequent change of position as is equivalent to a certain amount of rest. Standing in one position is known to be more fatiguing than walking; for, during standing, one set of muscles is in a constant state of active contraction, and thereby the circulation through the muscles is retarded. Much benefit can be derived from some form of active muscular exercise after the day's work is over, also from systematic friction and massage of the affected limb.

4778. *Sutherland on the True First Stage of General Paralysis.*—In the *Lancet*, August 1885, p. 339, Dr. Sutherland writes that he has noticed the following symptoms in cases which generally end in general paralysis of the insane; an inability to speak, write, walk, sing, read, or fix the attention as well as usual; a feeling, when conversing with others, that a blank had taken possession of the mind, rendering the patient unable for a moment to answer a simple question; a feeling of utter prostration after any unusual exertion; an inability to adjust the iris as rapidly as usual after looking at a near object, and then turning suddenly to one more distant; a fixed squint, lasting several minutes, unaccompanied by any loss of consciousness, or epileptiform attack, but yet causing much alarm and distress to the patient; sexual desire and erectile power much diminished, or morbid erotic desires towards women, especially in cases where the symptoms have been caused by a blow on the head or spine; tremor of

the feet and hands in performing simple actions. These are some of the earliest symptoms of this disease; and, in treating these cases, it is necessary to give the patient full directions with regard to his exercise and amusements; he must not over-fatigue himself with anything, must read light literature, and throw away all worries. In married people, sexual intercourse should be abstained from for at least six months.
RICHARD NEALE, M.D.

4779. *Hoffmann on Injury to the Radial Nerve cured by Suture and Electricity.*—The *Deutsche Med. Wochensch.* of July 2 reports a case mentioned by Dr. E. Hoffmann, at the Medical Society of Greifswald, of injury to the radial nerve cured by suture and electricity. The patient, a man aged 31, had sustained a fracture of the left arm in the middle third, which was treated at first by a plaster-of-Paris splint, and after three days by a more yielding bandage, probably on account of the already commencing paralysis. When the bandage was removed, after six weeks, the left radial nerve was found completely paralysed, the fracture having healed with a strongly developed callus. Electrical treatment was of no avail; and in August, three months after the fracture, the nerve was operated on by Dr. Bardenheuer, of Cologne. He found its conductivity interrupted, it being pressed upon by the callus, and he released and sutured the ends. In spite of this, the paralysis was still present when the patient came under Dr. Hoffmann's care in November 1884. The wrist and fingers were flexed to the volar side, voluntary movements of the muscles supplied by the radial nerve were impossible, and no contractions took place under the influence of faradic or weak galvanic currents. Strong galvanic currents, however, caused slight contractions, especially in the extensor carpi radialis, and as the KCC was greater than the ACC, the prognosis was not considered hopeless. The fingers were put on a splint to stretch the contracted flexor tendons, and galvanic treatment was systematically carried out, a descending current being passed from the brachial plexus to the forearm, or the kathode applied to the position of the suture, or labile to the forearm. In eight weeks the extensors of the wrist responded to the faradic current, and, in March 1885, the first voluntary movements appeared, gradually increasing in power. At the time of reporting, one year after the lesion, the patient could flex the wrist backwards, and clench the fist in that position; the last phalanges could not be extended completely, but pronation and supination were intact. The extensors and the flexor longus pollicis did not yet act voluntarily; but the galvanic sensibility had increased, although the faradic was still wanting, and there was good reason to expect that the cure would go on to completion.
ALICE KER, M.D.

REVIEWS.

ARTICLE 4780.

Inebriism: a Pathological and Psychological Study. By T. L. WRIGHT, M.D. Columbus, Ohio, U.S.A. 1885.

THE author, who is a well-known writer on inebriety, in this interesting volume enters upon a searching inquiry into the usual and most common causes of alcoholic intemperance, with a view to unravel the pathological nature and associations of this form of excess, and to indicate the laws of its dissemination among individuals. He justly points out the fallacy of regarding inebriety as simply a form of sin, to be cured only by a change of heart, a fallacy which has led to the rejection of practical remedial agencies for the cure of the disease. After an analysis of the phenomena of acute intoxication, the author proceeds to a definition of dipsomania, as 'an overpowering desire for intoxication.' The neurotic temperament is exhaustively treated, and prominence is given to the various causes, direct and indirect, from which it is developed. Among these are habits of intemperance long continued, the effects of physical injury in setting up an unstable nervous system, atrophy and hypertrophy of nerve-tissue, want of symmetry between the brain and the general bodily structure, educational over-pressure, and extreme mental exhaustion. The manifestations of the neurotic temperament are somnambulism, a form of modified consciousness, under the influence of which many crimes have been committed; alcoholic trance, during the persistence of which acts have unconsciously been committed of which the doer had no recollection, and which have been of so serious a nature as to have subjected him to severe punishment. The neurotic dathesis is credited with influencing the nature of the dipsomaniac impulse, an impulse often unaffected by will and quite irresistible. The author treats at length on the effects of alcohol on the brain of the inebriate. Among the most conspicuous are paralytic dementia, hypertrophy of connective tissue, contraction of the same with strangulation of capillaries, nerve-cell degeneration, rupture of nerve-fibres, loss of nervous co-ordination, defective intelligence, and broken down *morale.* Reference is also made to the anæsthetic influence of alcohol on the mental powers. The book is concluded with remarks on responsibility as affected by the narcotising power of alcohol, in the case of confirmed drunkards.
NORMAN KERR, M.D.

ARTICLE 4781.

A Practical Treatise on Diseases of the Kidneys and Urinary Derangements. By CHARLES HENRY RALFE, M.A., M.D. Cantab. London: H. K. Lewis. 1885.

DR. RALFE is well known as the author of an excellent manual on clinical chemistry, as well as a contributor of many valuable papers to the transactions of learned societies, on subjects germane to the department of disease on which he has now published so excellent and practical a treatise. He has every reason to expect a favourable reception for his book; and, having read it with some care, we can warmly commend it to the notice of the profession.

The scope of the book embraces all the varieties of renal and urinary disease that come under the care of a physician, but this may be best shown by quoting the headings of the chapters: General Symptomatology of Kidney-Disease, Clinical Examination of the Urine, Diffuse Inflammation of the Kidney, Suppurative Inflammation of the Kidney, Degenerations and Infiltrations of the Kidney, New Growths in the Kidney, Parasites in the Kidney, Abnormalities of the Kidney, Variations in the Amount of Urine (diabetes insipidus and mellitus, suppression of urine, &c.), Stone and Gravel, Functional Albuminuria, Peptonuria, and Hæmoglobinuria, with valuable appendices on special subjects, and a diet-table for diabetes.

The book throughout shows evidence of careful personal work and much thought; it is especially good in all details where chemical procedures are concerned. Dr. Ralfe is the first writer since Prout who has done full justice to the subject of fixed alkaline urine; he recognises its relationships to the uric acid diathesis, and rightly ascribes it to similar causes. He adopts the modern view that Bright's disease is really 'diffuse' inflammation of the kidney, discarding the artificial distinctions of 'parenchymatous' and 'interstitial,' except as synonyms for certain clinical types.

He gives much-needed encouragement by his reports of the successful treatment of renal calculus by distilled water and turpentine. Of late years operative interference has been not only justified by its success, but has seemed the only means of cure. If turpentine and distilled water can cure renal calculus, there can be no doubt they would be preferred by most patients to nephrotomy, and at any rate they deserve a trial.

While there are many points of doctrine with which we do not entirely agree, on the whole the book is a distinct advance on anything previously published in this country on the subject; and we heartily congratulate Dr. Ralfe upon having made so valuable an addition to medical literature.

ROBERT SAUNDBY, M.D.

ARTICLE 4782.

The Blot upon the Brain: Studies in History and Psychology. By WILLIAM W. IRELAND, M.D.Edin. Bell & Bradfute. 1885.

THE alluring title of this book, in addition to the world-wide reputation of its author, will at once secure it a place on the bookshelf of every student of psychology.

The previous work of this gifted writer, 'On Idiocy and Imbecility,' teemed with practical suggestions for the management of these hopeless forms of insanity. As a pleasant contrast to the former work, we now hail with delight a theoretical treatise on one of the most difficult branches of mental science, the study of hallucinations.

The work being intended to 'attract persons of culture beyond those directly interested in medical psychology,' the writer, very sensibly, warns his readers who are not well acquainted with the functions of the nervous system, that the introductory essay will be likely to be the most difficult in the whole book; but that, if diligently read, it will make the meaning of the succeeding pages much more easily understood.

Having thus tempted the reader to plunge into the sea of theory, Dr. Ireland very clearly leads him to the A B C of the subject—the outer world, influencing the nervous system by means of the special senses, such influences being recognised by the all-active nerve-cells. Healthy sensation chiefly referred to the peripheral extremities of the nerve-fibres is easily understood. But, when morbid influences are at work, complications and abnormalities are produced, which have ever puzzled, and will probably always puzzle, the most experienced pathologists as to their elucidation.

Delusions for the present are not considered, bu. definitions of illusion and hallucination are given which may well be contrasted with those given by Dr. Blandford in his well-known work on insanity and its treatment.

Dr. Ireland says: 'An illusion is an erroneous interpretation of a real sensation.'

Dr. Blandford says: 'An illusion is a false perception of the senses, or rather a mistaken perception.'

Dr. Ireland states that 'a hallucination is a perception of a sensation arising from changes within the organism, without any corresponding change in the outer world.'

Dr. Blandford affirms that 'hallucinations are false perceptions of the senses—the eye, the ear, the nose, and so on.'

All account of delusion is, as we have said, for the present neglected, the evident object of the work being to discuss the theory of the advent and presence of hallucination. But it may be remarked, in parenthesis, that, divide the subject as we may, there are in reality nine different forms of erroneous beliefs: 1, delusions of the insane; 2, of the delirious (including those of fever, alcohol, drugs, blood-poisoning, &c.); 3, of the sane; 4, illusions of the insane; 5, of the delirious; 6, of the sane; 7, hallucinations of the insane; 8, of the delirious; 9, of the sane. These, arranged in a table, with examples, constitute the best groundwork upon which to found our study of the erroneous beliefs both of the sane and of the insane.

Again, as to the mixtures of delusion with illusion, or with hallucination, Dr. Ireland remarks that 'anyone who takes the trouble to examine the cases of hallucination which occur in an asylum will soon find out that many of them can be reduced to delusions.' With this we quite agree; but, at the same time, we must be careful, in expunging the idea of hallucination in this or that patient from our minds in favour of delusion, that we do not ignore the possibility of an admixture of these two false beliefs, a mistake in theory which might lead to serious consequences in practice.

We must refer the reader to the book itself for the descriptions of the various celebrated persons in history who, being sane, yet suffered from hallucinations—Nicolai, Sir John Herschel, Dr. Kandinsky, and many others.

We pass on to the consideration of the causes of hallucinations, which every one who has studied the subject must acknowledge to be threefold:—(1) external, (2) internal, (3) mixed. Some interesting cases are given by Dr. Ireland of those dependent upon internal disorder of the brain. A young man had sounds in the left ear when he was thirteen years of age, after receiving a blow which caused inflammation of the internal ear. Dr. Mabille had a female patient who was troubled with noises in her ear, which disappeared after a piece of hardened wax, in the middle of which was a grain of corn, had been removed by injections of warm water.

The unsatisfactory subject of artificial hallucinations in hypnotised persons is next illustrated by the examples described by Féré, Binet, and others. The fact that hallucinations can be produced by simply holding down the head, showing that a mere difference in the quantity of blood-supply to the brain may produce morbid effects, is proved by the author's own experience, and that of Brierre de Boismont, Ball, Emminghaus, and Brierre.

As instances of erroneous impressions being produced by external influences, Dr. Max Hüppert's cases are cited, in which hallucinations of hearing obviously followed ideas arising in the mind or suggested by reading. A general paralytic found that, when he took out a book, the words which he read were repeated by a chorus of female voices, fifty or sixty in number. Dr. Hüppert (says Dr. Ireland) treats these as instances of double conceptions, arising from the unequal action of the two sides of the brain. Mental conceptions in one hemisphere were repeated in the other as hallucinations of hearing or of sight.

Dr. Parant (writes Dr. Ireland) enforces his argument that hallucinations sometimes take their origin from conceptions in the mind by giving the details of a case the like of which is not rare amongst the insane. Miss X., aged 38, is subject to mania of persecution. She makes complaints of her treatment in the asylum to imaginary persons, who generally get the title of major. The sexual character of these two last-mentioned cases is not without significance. Now, in both patients, these hallucinations were dependent upon some conception in the mind. Dr. Ireland states that cases like these are too numerous to be got rid of; and we must admit that, though an excited condition of the sensory tracts and nerves may be necessary to hallucinations, they may still take their origin from ideas in the mind. In a disease like general paralysis, which commences with inflammatory action of the higher centres, the grey matter of the brain, mental derangement precedes the hallucinations, which appear after the morbid process has diffused itself to those portions of the brain and nerves whose functions are sensory. In other diseases, the reverse takes place; the irritation commences with the nerves or lower ganglia, and spreads upwards to the surface of the brain.

Paper II. deals with the hallucinations of celebrated historical characters. Mohammed, who was an epileptic, saw an angel who told him that men were made of blood. Swedenborg said he could converse with angels in heaven, and had hallucinations of the sense of feeling—a shivering from head to foot as if many winds rushed together and shook him.

Luther attributed storms, winds, idiocy, lameness, and his own toothache and earache to the influence of the devil.

Joan of Arc had hallucinations of hearing. When aged 13 she heard a voice addressing her. It is noteworthy that she had fasted the day before. She was fond of hearing bells, and the voices of saints and angels mingled with their chimes. On one occasion the voice said to her, 'Fille Dé, va, va, va; je serai à ton ayde'—'Daughter of God, go, go, go; I will aid you, go.' This might readily be suggested by the sound of the bells, as in the old story, 'Turn again, Whittington, thrice mayor of London.'

Paper IV. refers to the debasing effects of unchecked power; V. to the hereditary neurosis of the royal family of Spain; and VI. to St. Francis Xavier, all historical subjects. Papers VII. to XII. are more exclusively devoted to solving certain theoretical problems in psychology.

Space being limited, we can only enumerate here the chief headings of these chapters, all of which are well worthy of perusal and analysis. They are, 'On Fixed Ideas', 'Folie à Deux,' 'Unconscious Cerebration,' 'The Relation of Words to Thought,' 'Left-handedness and Right-handedness,' 'On Mirror Writing,' and 'On the Dual Functions of the Double Brain.'

Dr. Ireland's work is an indication of a decided advance in the psychological literature of this country. It may be read with profit by the student, the practitioner, the specialist, and the public.

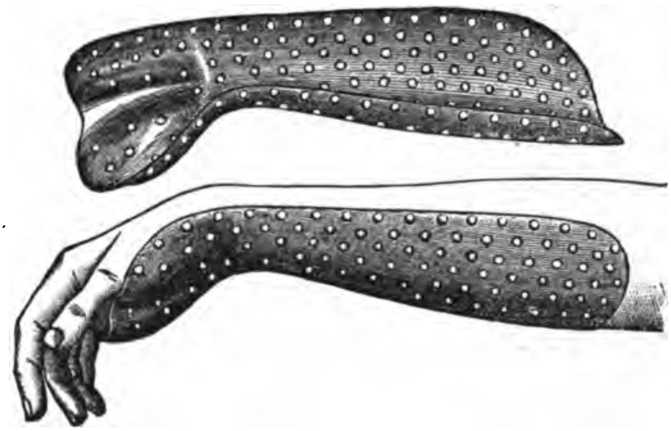
HENRY SUTHERLAND, M.D.

NEW INVENTIONS.

ARTICLE 4783.

ON THE USE OF PERFORATED AND FLEXIBLE METALLIC SPLINTS IN THE TREATMENT OF FRACTURE OF THE LOWER END OF THE RADIUS.

DR. R. T. LEWIS, surgeon to the Pennsylvania Hospital, holds that the first essential of the treatment of fracture of the lower end of the radius is complete reduction of the displacement, which, it is stated, can usually be effected under anæsthesia, by strong extension applied to the hand, associated with forced flexion of the wrist, and with pressure applied directly on the dorsal surface of the lower fragment. The apposition of the fragments in their normal positions is insured by the application to the flexor surface of the wrist, of a flexible metallic splint which follows correctly the radial curvature, and is moulded so as to receive the thenar and



hypothenar eminences of the hand, and is thus maintained immovably in its correct position with reference to the radial curve. The splint manufactured for this purpose, according to Dr. Lewis's directions, by Mr. J. Ellwood Lee, of Conshohocken, Pa., is made of nickel-plated copper which is perforated by numerous small orifices, and may be readily bent so as to fit exactly the injured forearm. This form of splint will no doubt be found very serviceable in the treatment of Colles' fracture. Its special points are: the correct shape with regard to the anterior curve of the wrist; the perforations which permit of ventilation and the removal of secretions; the flexibility of the material which renders the splint conformable to every size and condition of forearm; the splint is very thin and light, is much less cumbersome than a wooden splint, and can be readily retained in close contact with the injured limb by an ordinary roller two inches and a half, or three inches in width. This splint which certainly combines firmness and lightness to a superior degree, is very inexpensive and has the merit of being applicable not only to all cases of fracture of the lower end of the radius, but also to many other injuries involving the forearm and wrist. Indeed, it has been proposed to apply this perforated and plated copper in the treatment of fractures of other limbs, and a complete set of splints, we believe, is now in course of preparation by Mr. Ellwood Lee.

MISCELLANY.

The death of Professor Fehling, at Stuttgart, is announced. The reagent for testing the presence of sugar in urine bears his name. He had attained the age of seventy-five.

M. Claude Martin, a dentist of Lyons, has obtained at the Antwerp Exhibition, a diploma of honour for different apparatus invented by him for restoring the normal shape to the jaws, after resection of the maxillary bones.

According to Tommasi-Crudeli, small doses of arsenic act as a prophylactic against malaria in countries where it is endemic. If a second attack should occur, it is always in a milder form. After this treatment, quinine has a stronger effect.

The Free Medical Academy of Lima publishes a new journal called *El Monitor Medico*, which is intended to be the champion of the medical and scientific interests of the Peruvian medical profession. Señor Jose Cosmero Ulloa is the editor.

Porro's Operation.—This operation was successfully performed on Aug. 4, in the Maternity of Milan, by Dr. Ettore Truzzi. The patient was suffering from osteomalacia, and was in the second fortnight of the ninth month of pregnancy. On the thirtieth day she was able to get up, and at present is fairly well. The baby also is alive and healthy.

The Prefect of the Seine, in accordance with the wish expressed by the Municipal Council of Paris, has decreed that lady dressers at the hospitals (*externes*) shall be allowed to compete for the house surgeonship (*internat*) on complying with all the formalities required by the *Service de Santé*. Lady internes will be subjected to the same rules and regulations as their male colleagues.

M. Lancereaux, in a communication to the Académie des Sciences, states that a series of facts collected in his hospital wards, convince him that small-pox, measles, and scarlet fever are transmissible from the onset. The period of incubation varies, and is from eight to ten days in inoculated small-pox; from ten to twelve for spontaneous small-pox. A mild form of small-pox may by transmission induce either a violent or mild form of the disease.

Dr. Galippe gives the following advice concerning the care of children's teeth. Cleanliness ought to be taught, like spelling. A soft flexible brush should be used, and precipitated chalk with or without pulverised chlorate of potash. After each meal the mouth should be washed out. Cake and sweets ferment, injure the enamel, and render the teeth susceptible to caries. A weak alkaline solution is excellent for washing out the mouth.

Dangers from Drain-Ventilation.—Dr. John C. Thorowgood, in the *Lancet*, June 1885, p. 1148, calls attention to a danger that often occurs and yet is too frequently overlooked; but which, if remembered as possible, will greatly aid the practitioner in explaining the inroad of drain throats in houses most carefully inspected and found perfect in their internal sanitary arrangements. Dr. Thorowgood was called to attend a family long suffering from ulcerated throats, living in a house most carefully drained. It was found that the ventilating pipe of an adjoining building discharged its gas into the upper windows of the infected house.

M. Alexandre, chief inspector of the Department of Contagious Diseases in Animals in the Department of the Seine, states, in his report to the Prefect of Police, that he attributes the frequency of rabies in the dog—354 cases—to the faulty working of the dog tax, half of these animals not being paid for by their owners. He also deplores the suppression of the dog-muzzle, and urges the police authorities to disregard sentimental considerations and enforce its use. M. Alexandre proposes that the example given by Berlin should be followed in France, and that all unmuzzled dogs should be killed. He is of opinion that the liberty given to dogs is a serious danger to human life. In view of the sad cases of hydrophobia in young children recently reported in England, it might be well if our Inland Revenue authorities turned their attention to a more stringent collection of the dog tax.

Licking Adhesive Stamps and Envelopes.—In the *Lancet* of May 1883, p. 959, attention is drawn to the danger of the practice of licking stamps, envelopes, &c. Those who are frequently in the habit of thus moistening gum on adhesive surfaces suffer from sore tongues, and other signs of local irritation, besides sometimes propagating a special disease by the habit. A curious incident is noted where a person, who habitually took large quantities of morphia, sent an envelope which he had licked to a friend. This friend, wishing to reclose the envelope, also licked the adhesive surface, and was immediately violently sick. The mere touch of the tongue of the morphia-taker had rendered the gum intensely nauseous. The case illustrates how easily infection can be carried, and ought to be a warning to those who are in the habit of fastening stamps and envelopes in the manner described.

M. Regnard has made a further communication to the Paris Biological Society concerning the objective phenomena observed in animals submitted to the influence of high pressure. He referred to previous communications which demonstrated that the principal phenomena were muscular contraction and coma. A microscopic analysis made under the direction of M. Vignal, of the Collège de France, showed that these phenomena were due to the fact that water had penetrated the tissues and destroyed them. More recent observations revealed that the phenomena that occur during compression are stimulation of the nervous system followed by inhibitory phenomena due to compression; if the compression persists there is imbibition of water by the tissues; nervous phenomena are manifested, and a latent vital condition exists, until by lessening the pressure the tissues are freed from water. If the pressure is prolonged the *restitutio ad integram* of the tissues is impossible, and death ensues.

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From 'THE LANCET,' December 18th, 1869.

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The London
Medical Record

A MONTHLY REVIEW OF THE

Progress of the Medical Sciences and of Subjects relating to Public Health

EDITED BY ERNEST HART

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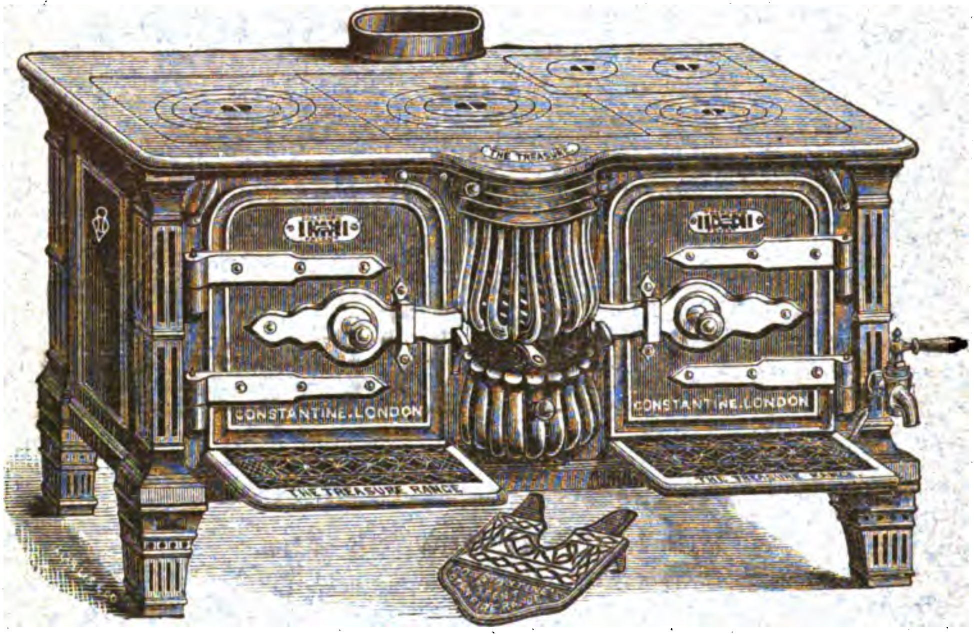

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The London Medical Record.

ARTICLE 4784.

PASTEUR ON HYDROPHOBIA.

M. PASTEUR, at a recent meeting of the Académie des Sciences, stated that, after innumerable experiments, he had arrived at a prophylactic method which rendered animals exempt from rabies; one so prompt and practical, that he does not hesitate to apply it to animals in general, the human race included. A rabbit after trephining is inoculated under the dura mater from the spinal marrow of a rabid dog; the rabbit becomes rabid after fifteen days' incubation; a second rabbit is inoculated from the first; a third from the second, and so on through a successive series; a tendency to present a shorter time of incubation is soon exhibited. After twenty or twenty-five successive inoculations, the period of incubation is reduced to eight days, which continues through a further successive series of twenty inoculations, and the incubation period is then reduced to seven days, which continues through a further series up to the ninetieth inoculation. M. Pasteur has arrived at this number of successive inoculations; and there is a very slight tendency to exhibit an incubation period of less than seven days. These experiments were begun in 1882, and have been carried on during three years without the series having been once interrupted or any virus used, but a successive series of rabbits, dead from rabies; thus it was perfectly pure and always the same. This, says M. Pasteur, is the *nœud pratique*—the secret of the method. The spinal cords of these rabbits are virulent throughout. If a small fragment be detached from these cords and suspended in dry air, the virulence gradually disappears. The length of time necessary for its final disappearance depends on the thickness of the fragment and the temperature; the lower the temperature, the longer the virulence lasts. When the rabid spinal marrow is placed in carbonic acid gas, the virulence lasts during several months, always provided it is preserved from contact with foreign microbes. In order to render a dog refractory to rabies in a comparatively short time, M. Pasteur adopts the following method. A series of bottles containing dry air are made ready by placing in each a piece of potash. Every day, a fragment of a spinal marrow from a rabbit recently dead from rabies after seven days' incubation, is placed in one of these bottles; every day a dog is inoculated under the skin with a Pravaz's syringe full of sterilised broth, in which a fragment of one of these dried cords has been mixed. The first inoculation is made with a fragment prepared several days before the inoculation is made, in order to be sure that it has lost its virulence. The following inoculations are made with preparations more recently prepared; the last used is of one or two days' date. The dog thus treated is incapable of contracting rabies.

M. Pasteur had arrived at this stage of his experiments when a child was brought to his laboratory, badly bitten by a mad dog; sixty hours afterwards he was inoculated under the skin of the right side with a Pravaz's syringe half full of marrow removed from a rabbit which had been exposed to dry air during fifteen days. The succeeding days, the inoculations were made in the following order:—

July 7	9 A.M.	Marrow	14 days.
July 7	6 P.M.	„	12 „
July 8	9 A.M.	„	11 „
July 8	6 P.M.	„	9 „
July 9	11 A.M.	„	8 „
July 10	„	„	7 „
July 11	„	„	6 „
July 12	„	„	5 „
July 13	„	„	4 „
July 14	„	„	3 „
July 15	„	„	2 „
July 16	„	„	1 „

Thirteen inoculations were made, and the treatment lasted ten days; Joseph Meister, the child in question, is in perfect health at the present time. M. Pasteur does not believe that the progressive attenuation of the virus of the spinal cords exposed to dry air results from the contact with this air; he believes it to be more probable that the microbes, the cause of rabies, produce during their artificial cultivation a substance hostile to their own development; data already acquired concerning the *modus vivendi* of these organisms support this hypothesis. M. Pasteur at a future period will publish further details. M. Pasteur has other patients under treatment who have been bitten by mad dogs. He urges that an establishment should be organised, where rabbits might always be kept inoculated with the disease; a never-failing supply of spinal cords of both old and recent inoculation would thus be furnished. W. VIGNAL.

ARTICLE 4785.

VIGENER ON PIPITZAHOÏNIC ACID.

Der Fortschritt of July 5 reproduces from the *Deutsch-Amerikanische Apotheker-Zeitung* an article by Herr Vigener on this subject.

Pipitzahoïnic acid, also called 'vegetable gold, *aurum vegetabile*,' from its appearance, is the product of several species of Perizia Lagart, an indigenous plant belonging to the tribe of the Asteroideæ of the natural family of the Compositæ of Mexico, and of the south-western parts of the United States of America. It is generally obtained from the root of the *Perizia Wrightii*, which, of all other kinds of this plant, yields the greatest quantity and the purest quality of the acid.

The root is imported already cut up in pieces of 8 to 10 centimètres (3 to 4 inches) in length, and 2 millimètres (·08 inch) in thickness. These are of brown or reddish-brown colour, and more or less rough from longitudinal furrows or wrinkles, likely in consequence of desiccation. The yellow secretions of the pipitzahoïnic acid appear distinctly visible to the naked eye on the transverse section, and their source is brought into view by means of a lens. The cortical layer of the root consists of an external double row of thick-walled, flattened, dark-coloured cells, followed by several rows of collenchyma cells, which continue inwards into the fundamental parenchyma of the root. The cells which contain the yellow crystalline acid are arranged in circular groups of three to five, corresponding with the transverse section of the fibro-vascular bundles. Besides, star-shaped crystalline groups of the acid are disseminated all through the fundamental parenchyma.

The root is of bitter but not unpleasant flavour, with a more or less persistent pungent after-taste. Its alcoholic extract is of deep yellow colour, and forms, with an excess of boiling water, a copious golden-yellow crystalline precipitate, which, on addition of diluted caustic potash, will assume a dark violet tint.

F. Mylius communicates, in the *Berichte der Deutschen Chemischen Gesellschaft*, the latest analysis of this acid. Pipitzahoïnic acid, he states, is evidently a chinon-compound. It forms golden glittering scales, melting at 106° to 107° C. (222°·8 to 224°·6 F.) Concentrated sulphuric acid will change the gold into bright scarlet, which after a short time will give way again to the original colour. The yellow alcoholic solution is rapidly discoloured by protochloride of tin, whereby hydrochinon is formed. This, by shaking the liquid with ether and evaporation, will separate as a colourless mass, which is insoluble in water, and readily reoxydises into chinon by the addition of perchloride of iron. The so-called pipitzahoïnic acid, in its alcoholic solution, will form with aniline a new compound in the shape of beautiful crystalline needles of the peculiar blue tint of the cornflower (*Centaurea cyanus*), which, on treatment with concentrated oil of vitriol, will dissolve into a blue liquid. From the formula $C_{15}H_{20}O_3$ it appears quite impossible that this compound represents an anthrachinon, as in this case the twenty atoms of hydrogen could not be accounted for. It is more likely that the formula $C_{15}H_{20}O_3$ expresses the combination of the radical of benzochinon with remnants of alkyles, and that the pipitzahoïnic acid is a derivative of an oxychinon: $C_6H_{14}O_3$, in which one atom of hydrogen is substituted by the remnant of an unsaturated hydrocarbonate, by C_9H_{18}, the constitution of the above formula consequently being $C_8H_3O_3$ (C_9H_{17}).

R. Anschuetz, who has been engaged for a considerable time with the analysis of the pipitzahoïnic acid, confirms the results of Mylius. He and W. Leather obtained several derivatives of the acid. The root (*Radix Perizia*) contains on an average 3·6 per cent. of pipitzahoïnic acid.

Acetyl-pipitzahoïnic acid, $C_{15}H_{19}O_3$ (C_2H_3O), is produced by heating for a considerable time the acid with double its weight of acetic anhydride. This acetyl forms large colourless crystals of the rhombic system. The aniline compound, mentioned by Mylius, is likewise constituted after the following equation: $2C_{15}H_{20}O_3 + C_6H_5NH_2 = C_{15}H_{19}(NHC_6H_5)O_3 + C_{15}H_{22}O_3$, which shows that at the same time half of the pipitzahoïnic acid employed will be reduced into hydrochinon. Toluidine behaves in the same manner. FERD. ADALB. JUNKER, M.D.

ARTICLE 4786.

WOLFF ON NAPHTHOL FOR THE PRESERVATION OF ANATOMICAL PREPARATIONS.

Der Fortschritt, July 26, No. 14, copies from the *Deutsch-Amerikanische Apotheker-Zeitung*, an original communication on the above subject by John Wolff, who writes:—When I discovered in 1881 the disinfectant properties of naphthol, I was unable to employ it, not having obtained a perfectly colourless and inodorous preparation, until I lately succeeded in producing a permanently white inodorous naphthol. Of this, 500 parts by weight were dissolved in water and left to cool. From this cold solution a small portion crystallised (only one part of naphthol being soluble in not less than 520 parts of cold water).

Such a cold solution, containing a few free crystals, presents a far better medium for preserving anatomical preparations than alcohol or any other kind of fluid. Fresh preparations, which had been kept in it for several years, remained unaltered; and preparations, which, at the time when they were placed in the solution, were already very offensive from incipient decomposition, showed shortly afterwards only the peculiar smell of Liebig's extract of meat. Preparations ought to be placed in their natural condition into the fluid, and be removed after from four to six days, in case they should betray the faintest tainted odour; when, after being transferred into a fresh solution, they will keep any length of time. Care must be taken, however, that no portion of the preparation remains exposed above the surface of the fluid, else it will putrefy. Another point to be observed is, that the naphthol has not entered into combination with sodium or any other alkali-metal, or with ammonia, and that none of these be either directly brought into the solution or introduced with the preparation, as the disinfecting properties of the naphthol would in that manner be perfectly annihilated.

If the preparations contain fat, this had better previously be removed, as it dilutes the solution and weakens or destroys its action. Preparations containing air are to be kept by means of pressure or weight below the surface of the fluid, until they are submerged; shortly afterwards they are to be placed in a fresh solution. In every instance the solution ought to be perfectly concentrated, and be kept in this state, which is proved by the presence of the crystalline surplus of naphthol. Should these crystals, for any special reason, be objected to, they may be removed by filtration. Such a solution of naphthol being very cheap (one gallon costing about a few cents. or half-pence) and by far more efficient than alcohol, it likely will soon supersede the use of the latter for preserving anatomical preparations. FERD. ADALB. JUNKER, M.D.

ARTICLE 4787.

REBER ON TERPINE AND TERPINOLE.

AN article on this subject, by Dr. B. Reber, has appeared in *Der Fortschritt*, June 5, 1885.

Terpine, or more accurately Hydrate of Terpine ($C_{10}H_{16}$, $2HO^2O + Aq$), has only lately been first employed by Drs. Lépine and Fournié in the hospitals of Lyons. Its action is similar to that of the oil of turpentine, but more intense; it must therefore be prescribed in much smaller doses, either in watery or in alcoholic solutions. Being perfectly odourless and tasteless, it is not unpleasant to the patient. Given in doses of 0·2 to 0·6 gramme (3 to 10 grains) it is reported to be of very beneficial effect in catarrh of the lungs, especially in chronic cases, rendering the secretion more copious and thinner, and easing expectoration. Larger doses produce the contrary effect, checking the secretion, and might, according to Dr. Lépine, prove beneficial in bronchorrhœa

Larger doses likewise have a diuretic action, and have been found very serviceable in several cases of chronic nephritis. Great precaution, however, is required in Bright's disease; experiments on dogs having shown that larger doses cause albuminuria and sometimes even hæmaturia. A dose of one gramme (15½ grains) has a similar action on the nervous system to that of several grammes of oil of turpentine, and is reported to have cured neuralgia in several cases. Three grammes (46 grains) is a fatal dose for dogs of 20 kilogrammes (44 lbs.) in weight, rapidly producing accelerated and irregular respiration, very high temperature, excitement, and copious hæmoptysis.

Terpine is prescribed in aqueous or alcoholic solutions with syrup in bronchitis, with white wine in diseases of the kidneys. Astringents—*e.g.* syrup of catechu, are added to larger doses, in order to prevent diarrhœa.

According to Dr. Lépine's experience, terpine is in most cases preferable to oil of turpentine. It acts as a diuretic, and increases or diminishes the secretion according to the dose given.

Dr. Guelpa's investigations of the chemical, physiological, and therapeutical properties of terpine, however, do not corroborate the above observations. He makes the following statements. 1. Terpine, even in large doses, will not manifest the slightest influence on the respiratory organs. 2. Doses of 2 or 3 grammes (30 to 45 grains) do not act on the uropoietic system in man; larger doses cause neither albuminuria nor hæmaturia, but produce a surplus of phosphates by impairing digestion. 3. Smaller doses than 2 grammes are without effect on the nervous system. Very large doses would be required to produce ill-effects, at least in the proportion of 2 grammes to each kilogramme (2 lbs.) of the total weight of the body.

It appears, from this discrepancy of opinion, that Dr. Lépine and Dr. Guelpa experimented with different preparations.

Dr. Guelpa's reports on terpinole—$(C_{10}H_{16})2H_2O$—which is a derivative of terpine, are more favourable. Terpinole is prescribed in capsules, each containing 0·1 gramme (1½ grain), which may be given without any fear of producing troublesome symptoms. Its principal action remaining entirely confined to the respiratory ducts, it has proved very beneficial in catarrh.

The manufacture of terpine is very easy. Four parts of oil of turpentine, three parts of 80 per cent. alcohol, and one part of nitric acid, are mixed in a bottle and frequently shaken, as the mixture on standing continues to separate into two layers. In the course of from fifteen to twenty days the fluid assumes a reddish tint and large crystals form in rosette-like groups. These, after having been pressed between filter-paper in order to free them from any still adherent oil of turpentine, are again dissolved for recrystallisation in alcohol of 95 per cent., to which a minute quantity of caustic potash is added for the purpose of removing any trace of free nitric acid. This concentrated solution having finally been filtered and left undisturbed in a low temperature, the formation of white, needle-shaped, silky crystals takes place. The crystals thus obtained are perfectly odourless and tasteless, and dissolve but sparingly in cold water (1 to 200), readily in twenty-two parts of hot water, and still more in alcohol. Oil of turpentine, treated in this manner, yields 10 per cent. of terpine.

Extensive experiments with both preparations are at present being carried on at Geneva, the results of which will be published in due time.

FERD. ADALB. JUNKER, M.D.

ARTICLE 4788.

EWALD, GUTTMANN, AND LANDENBERGER ON THALLIN.

THE following is taken from *Der Fortschritt* of May 20, 1885. Thallin, like other compounds allied to quinine—viz., chinolin, kairin, antipyrin, and ethyl-thallin, possesses the property of lowering the abnormal temperature in fever. Professor Nothnagel, of Vienna, and Professor Biermer, of Breslau, tested its efficacy in their clinical wards, giving it in doses of 0·25 to 0·35 gramme (4 to 6 grains). The results of these trials were recently published in two papers by Dr. Jaksch (Vienna) and Dr. Alexander (Breslau), both speaking favourably of this remedy.

Dr. Ewald, who about twelve months ago brought his observations on kairin before the Medical Society of Berlin (*Berliner Medicinische Gesellschaft*), read at the meeting of the same society, on March 12, 1885, a paper, illustrated by carefully taken curves, on his experiences with citrate and tartrate of thallin. In the groin of a patient, aged 47, suffering from thrombosis of the right femoral vein, a hard, prominent, immovable tumour, of the size of a man's fist, surrounded by intensive œdematous swelling, had formed. From the beginning of this year the temperature constantly rose to 39°·5 C. (103°·1 F.), and even higher. Dr. Ewald, commencing on Feb. 19, administered thallin in doses of 1 to 1½ grain every two hours; and, although employing much smaller doses than Nothnagel and Biermer, he succeeded in reducing the temperature within its normal range. On discontinuing the remedy, the temperature immediately rose again. Thallin, Dr. Ewald remarks, possessing the same properties as the above-mentioned compounds, differs from kairin and antipyrin by its efficacy in much smaller doses, and by the absence of concomitant effects—viz., perspiration, nausea, dyspnœa, and disturbance of the pulse.

As far as we may judge from comparing the effects of these compounds, they are by no means antifebrile or antipyretic remedies in the sense that they possess the power of reducing the temperature itself, *i.e.* the increased oxydation which causes the rising of the temperature, and manifests itself by the measurable temperature of the surface of the body; they are merely antithermic remedies. Their action may be compared with the effect of opening the windows of an overheated room. The temperature will sink near the windows, but will increase in proportion as we approach the fireplace, where the heat will remain unaltered. The same is the action of these remedies; they induce an increased radiation of heat to the surrounding media, probably by dilatation of the blood-vessels, but they have no influence whatever on increased oxydation and on the pathological process itself. The blood nearer to the focus of the inflammation will receive heat, and give it off again on the surface of the body. This explains why, on discontinuing the remedy, such immediate and rapid rising of the temperature will take place, which is not the case with the genuine febrifuge medicines, such as quinine, the action of which is more permanent.

In the ensuing discussion, Dr. P. Guttmann, who likewise had made numerous experiments with thallin in fevers, objected to the use of thallin as an antipyretic remedy, because the temperature, although rapidly sinking under its use, rises again with equal rapidity on discontinuing it, which is also one of the drawbacks of kairin; and because the re-increase of the temperature is frequently preceded by rigors. For the same reason, kairin, the antipyretic virtues of which had been greatly exaggerated, has not met with general favour. Dr. Guttmann, from extensive experience, considers antipyrin as the best of these remedies, being entirely free from any undesirable concomitant effect.

Der Fortschritt of July 20 reproduces from the *Allgemeine Wiener Medicinische Zeitung* a report on thallin by Dr. Landenberger, who employed with signal success sulphate of thallin, supplied by the B-Aniline and Soda Works (Stuttgart), in seventy cases in the St. Catharine Hospital at Stuttgart.

Of these seventy cases there were fifteen of croupous pneumonia, ten of typhoid fever, ten of peritonitis, seven of pleurisy, seven of tuberculosis, six of erysipelas of the face, four of miliary tubercle, two of acute rheumatism, two of puerperal fever, one of gastric fever, and one of angina.

In no instance were inconvenient concomitant or subsequent effects (*e.g.* collapse, cyanosis, &c.) observed. In every case there was a continuous decrease of temperature, which frequently became even subnormal. The antipyretic action continued proportionately to the *single* dose given, three, five, and six hours; after which a gradual elevation of the temperature took place, so that the primary temperature was reached again, and exceptionally even exceeded, within eight or ten hours.

The single doses administered were in twelve cases 25 centigrammes (4 grains); in thirty cases, half a gramme (8 grains); and in twenty-eight cases, 1 gramme (16 grains); and even after the latter large doses, no troublesome symptoms were produced. The pulse likewise fell in the same ratio, but the respiration was not materially influenced.

The temperature, for instance, of a patient at 25, suffering from pneumonia, was at 9 P.M. 39°·0 C. (102°·2 F.); it fell, after a single dose of 1 gramme (16 grains) of sulphate of thallin within one hour, at 10 P.M., to 37°·2 C. (98°·18 F.), and showed at 12 P.M. 36°·3 C. (97°·6 F.); henceforth it recommenced rising, and reached at 2 A.M. 38°·3 C. (100°·18 F.), at 4 A.M. 38°·9 C. (102° F.), and at 6 A.M. 39°·3 C. (102°·14 F.)

These and other confirmatory observations lead to the following conclusions.

1. Sulphate of thallin may be given in single doses from 25 centigrammes to 1 gramme (4 to 16 grains), as a safe and promptly acting antipyretic remedy, in all kinds of febrile disease, especially in the typical fever accompanying tuberculous processes in which kairin is contra-indicated; in these, however, the use of thallin will require a certain cautious limitation in consideration of its liability of increasing the tendency to distressing and debilitating perspiration particular to this malady. Thallin is not alleged to be a specific. It has the advantage of not producing troublesome concomitant and after-effects.

2. It is given in a single dose. The average dose for an adult, in order to produce decrease of temperature of sufficient energy and duration, is half a gramme (8 grains), either taken in a wafer or in wine or water, in which thalline-salts readily dissolve. Its mixture with cherry-syrup (syrupus cerasi nigræ) will be found very convenient for children and for persons objecting to its flavour.

3. Sulphate of thallin promises to become a valuable substitute for quinine.

4. It has proved of particular efficacy in the fever of simple and of erratic erysipelas, which are less amenable to the action of quinine and antipyrin.

FERD. ADALB. JUNKER, M.D.

ARTICLE 4789.

LIVIERATO AND PREDAZZI ON THE BIOLOGICAL AND THERAPEUTIC ACTION OF THALLIN.

DRS. LIVIERATO AND PREDAZZI have published an article on the biological and therapeutic action of thallin in *La Med. Contemp.*, July, August, and September 1885. The sulphate of thallin used by the authors in their experiments, is an amorphous dirty white powder, of grateful aromatic odour, like burnt almonds, of bitter taste, soluble in water, the solution having an acid reaction. In doses of 0·25 to 0·5 gramme, the salts of thallin depress the normal temperature from 0·2 to 1°·2 C. The depression commences in from half an hour to one hour after the administration of the drug. The pulse and respiration are at first slightly slowed. The intra-arterial pressure at first slightly increases; after an hour, it generally is diminished and returns to the normal. The sphygmographic curve is unaltered. In pathological temperatures, a single dose of 10 centigrammes causes a depression of from 0°·7 to 2° C. One dose of 0·25 gramme is capable of causing a depression of 3°·1 C.; one dose of 0·5 gramme, a fall of 3°·3 C.; one dose of 0·75 gramme, a depression of 4° C.; and one gramme a fall of 4° C. The antipyretic action becomes manifest after one hour, and reaches its maximum after two hours if the depression be less than one degree centigrade; in three to four hours, if it be greater. The duration of its action is from two to ten hours.

Thallin does not influence the quantity of urine passed. After the administration of from 0·75 gramme to one gramme, the urine becomes of a greenish or olive-green colour. Thallin is found in the urine one hour and a half after its administration; the greater proportion is eliminated in the first ten hours. Perchloride of iron gives a dark red colour, more or less intense, according to the quantity of thallin present. In apyretic subjects, in doses of 0·5 to 0·75 gramme, it causes a dilatation of the peripheral vessels. This dilatation precedes the fall of temperature, and commences in ten to fifteen minutes after the administration of the drug, reaching its maximum after one hour. When fever exists, the dilatation of vessels is much more marked, and the higher the temperature, the greater is the dilatation. Thallin causes marked diminution of the urea excreted. A single dose of 0·5 gramme may cause a diminution of five grammes in the twenty-four hours; larger doses cause a still larger diminution. The quantity of carbonic acid eliminated in respiration is also much diminished. A dose of two grammes of thallin causes a diminution of 0·12 to 0·4 gramme of carbonic acid in one hour, for every kilogramme of the weight of the body.

In typhoid fever, doses of 25 centigrammes caused a fall of 3° C.; larger doses, ·5 to 1 gramme, a fall of 4° C., the temperature remaining low for six or seven hours. Several cases are related, in which the remedy was given in repeated doses for several days. For instance, in one case the patient was kept under the influence of thallin for 111 hours (April 11 to 16). During this time, the temperature remained below 38° C. for seventy-eight hours, oscillated between 38° and 39° for nineteen hours, between 39° and 40° for twelve hours, and exceeded 40° for only two hours. The quantity taken in this time was 13 grammes. The remedy had no depressing action on the pulse and circulation, which rather improved in force while becoming less frequent.

In many cases of pneumonia, thallin also proved beneficial, the temperature being considerably lowered, while the general symptoms improved.

In hectic fever (phthisis), in two doses of 0·2 gramme given during apyrexia, it maintained in several cases the apyrexia for ten or more hours. In doses of 60 centigrammes, it prevented the evening rise of temperature, not only on the day of administration, but also on the day following.

In intermittent malarial fever, doses of 0·5 gramme are sufficient to cut short the paroxysm. Smaller doses, 0·25 gramme, given at the commencement of a paroxysm, prevent its further development. After the administration of thallin, the paroxysms lose their type, and the intervals between one paroxysm and another become longer.

Its antipyretic action was also proved in pleurisy, diphtheria, measles, and other febrile diseases.

The author's experiments fully confirm the importance of thallin as the best antipyretic. Its action is prompt, and it is invariably well borne by patients. Even when given in the large dose of 7 grammes in twenty-four hours, it never gave rise to unpleasant symptoms. Before the temperature rises again, the shivering is never so great as after the administration of kairin; with the greatest depression obtained, 34°·7, no alarming symptoms occurred, as have been observed after kairin and antipyrin. Fifty centigrammes of thallin cause a much greater fall of temperature than the same quantity of antipyrin, the action also lasting much longer; with larger doses, the contrast in favour of thallin is still more marked. Thallin may also be conveniently given hypodermically; ·01 to ·015 gramme dissolves with gentle heat in a gramme of distilled water. The authors conclude by saying that their experiments authorise them in concluding that thallin is the most potent and useful antipyretic at present known. G. D'Arcy Adams, M.D.

Article 4790.

PULIDO ON STATISTICS OF FERRAN'S ANTICHOLERA INOCULATIONS.

Dr. Pulido says (*El Siglo Medico*, Sept. 13 and 20, 1885) that the value of Ferran's inoculations must finally be determined by the results obtained in a sufficiently large number of cases. Facts are accumulating; in 70 towns over 40,000 persons have been inoculated, and of all these a careful register has been kept; and it is probable that before the conclusion of the epidemic, 50,000 cases will have been collected. A pamphlet has recently been published giving the statistics of seven towns, and to these Dr. Pulido is able to add those of 12 more. All these statistics are certified as correct by the resident medical men, and the town authorities, the alcaldes, judges, and parochial clergymen. It will be interesting to give shortly these figures.

Alberique (Official Census, 4,996).—Cholera appeared on May 6, and between that day and May 17 there were 15 cases and 6 deaths. Between May 17 and June 16, 1,188 persons were inoculated. The statistics are divided into three groups—1. Before inoculation; 2. Period of inoculation; 3. After inoculation.

		Not Inoculated.	Inoculated.	Re-inoculated.
1. May 6 to 16.	Cases	15	—	—
	Deaths	6	—	—
2. May 17 to June 21	Cases	154	8	1
	Deaths	65	1	1
3. June 22 to Aug. 6.	Cases	66	3	4
	Deaths	26	—	—

Alcira (Official Census, 16,000).—In the three months from May 1 to July 31, 11,050 persons were inoculated, leaving 4,950 uninoculated. Among the inoculated 99 cases occurred with 24 deaths; among the uninoculated, 404 cases occurred with 206 deaths.

Benifago (Official Census, 3,615).—Cholera appeared on May 10. Up to June 21, 138 cases occurred with 89 deaths; 633 persons were inoculated to this period, none of whom were attacked by the disease. From June 21 to June 30, 119 cases occurred with 71 deaths, and one case, not fatal, among the inoculated. On June 28, 29, and 30, 2,315 people were inoculated, such was the faith inspired by the previous inoculations. From July 1 to July 5 there were 18 cases with 17 deaths among the uninoculated, and 21 cases with 6 deaths among the inoculated. (Ferran holds that protection is not given until after the expiration of five days from inoculation.) From July 6 to the conclusion of the epidemic, remembering that at the commencement of this period the inoculated population is 2,717 and the uninoculated 715, and that from May 10 to July 5 there have been 177 deaths in the uninoculated and 6 in the inoculated, there occurred 9 cases in the uninoculated with 8 deaths and one non-fatal case in the inoculated.

Catarroja (Official Census, 5,521).—The first invasion of cholera occurred on June 12, the second on the 18th; between the 18th and 30th there were 219 cases with 88 deaths; 1,319 persons were inoculated. During the first five days, among the uninoculated there were 177 cases and 85 deaths; among the inoculated 46 cases and 21 deaths; after the sixth day, among the uninoculated 124 cases and 125 deaths; among the inoculated 10 cases and 2 deaths. During the whole period, from July 1 to August 5, the termination of the epidemic, 311 cases occurred among the uninoculated, with 222 deaths; in the inoculated before the fifth day 46 cases and 22 deaths, after the fifth day 13 cases and 3 deaths.

Cheste (Official Census, 5,227).—Between June 16 to 30, 175 cases occurred with 65 deaths. From June 30 to July 3, 3,136 persons were inoculated. From July 5 the inoculated population, forming three-fifths of the whole, afforded no case of cholera, while among the uninoculated 47 cases occurred with 25 deaths.

Chiva (Official Census, 4,386).—From June 15 to June 30, 1,308 persons were inoculated. From July 1 to August 10, 140 cases and 54 deaths occurred among the noninoculated; 11 cases and 5 deaths among the inoculated.

Masanasa (Census, 2,596).—From May 17 to June 30, 1,973 persons were inoculated; 1,555 on

June 29 and 30. After the bulk of these inoculations were made there were 12 fresh cases and 15 deaths amongst the non-inoculated, and 37 cases with 25 deaths amongst the inoculated. In the second period, from July 6 to August 17, there were 35 cases and 24 deaths amongst the unvaccinated minority, and 11 cases and 6 deaths amongst the inoculated.

Albaida (Population, 3,290).—From July 14 to August 24, 670 persons were inoculated. Amongst the non-inoculated, 205 cases with 84 deaths occurred; 12 cases with 3 deaths amongst the inoculated within the first five days succeeding inoculation, none after.

Dr. Pulido also gives the statistics of Cervera de Maestre, Belleguart, Santa Pola, Montroy, Montaverner, Albacete, La Roda, San Clemente, Alcalá de Chisbert, Bélgida, and Puebla de Rugat. These need not here be given in detail; it is sufficient to say that the reports from all are as favourable to the prophylactic powers of inoculation as the examples already given. Reports from many other towns and districts are promised at the conclusion of the epidemic. Should these corroborate the facts already obtained, a very strong case will have been made out for the inoculations advocated by Ferran.

G. D'ARCY ADAMS, M.D.

ARTICLE 4791.

WEST ON THE OCCURRENCE OF BLOOD IN THE URINE IN GRANULAR KIDNEY.

IN the *Lancet*, July 1885, p. 104, Dr. Samuel West records three cases of blood in the urine of patients suffering from granular kidney.

The first occurred in a girl, aged 21, who had suffered from childhood with a chronic discharge of the ear. She came to the hospital, complaining of having to get up several times during the night to pass urine. She was also subject to attacks of excitability, accompanied by great pains in the head and retching. On examining the eyes, double optic neuritis was discovered. The arteries were found to be thickened, the heart hypertrophied, and the urine contained albumen. The diagnosis of granular kidney was made from these facts. The day after the patient was admitted, the urine was of a bright-red colour, and contained much recent blood. The urine continued in this state for sixteen days, when the colour became normal, but still contained one-third of albumen. The patient had several attacks of excitability, with frequent epistaxis, and later on small purpuric spots appeared on the hands and legs. Ten weeks after admission, she became very delirious, and died. On *post mortem* examination, the kidneys were found to be well-marked examples of granular kidney. The arteries were much thickened; the heart weighed 15½ ounces, though the patient only weighed about 6 stone.

The second case occurred in a young man aged 19, who always considered himself to be in good health, until three months before he was admitted into hospital, when he suffered from hæmorrhage from the bowels. Two days before admission he complained of sore-throat, and general aching pains all over him; he also noticed that his urine was very dark-coloured. On examining the urine it was found to contain one-fourth of albumen, and to be of the colour of porter. There was no œdema anywhere, but the arteries were thickened and the tension raised. The urine continued to contain blood for a week afterwards, and a trace of albumen remained for more than three months. The quantity passed during the twenty-four hours was large, being 80 to 100 ounces, and of low specific gravity. From these symptoms, the author was convinced that the case was one of granular kidney.

The third case was that of a man, aged 34, who had been a heavy beer-drinker. He suffered from œdema of the legs, and frequent attacks of hæmaturia. This case was looked upon as one of old granular mischief, with intercurrent attacks of acute nephritis.

In the first case, the author considered the hæmorrhage to be from the lower part of the urinary tract, and not from the kidneys, as the quantity was so large that calculus was suspected. In the other cases, probably, the blood came from the kidneys. These cases can be diagnosed from ordinary acute nephritis by the following symptoms:—1. the complete or almost complete absence of œdema; 2, the great fluctuation of the amount of blood and albumen at different times; 3, the subsequent course of the case, the diagnosis of granular kidney becoming clear as the case progresses. The explanation of the hæmorrhages is probably the same as that given to the hæmorrhage which occurs in other parts of this disease, such as epistaxis, enterorrhagia, hæmorrhage into the retina, brain, &c. If this be so, the author adds, it is remarkable that hæmaturia is not of more frequent occurrence in granular kidney.

RICHARD NEALE, M.D.

ARTICLE 4792.

GOODHART ON MORBID ARTERIAL TENSION.

IN the *British Medical Journal*, Aug. 1885, p. 327, is published 'The Bradshawe Lecture,' delivered by Dr. Goodhart, before the Royal College of Physicians of London. The lecturer commenced by alluding in feeling terms to the death of Dr. Mahomed, who had been elected to deliver the lecture for this year, and chose for his subject one which embraced the work of Mahomed.

Much of the lecture is occupied by looking at the question derived from the association of arterial tension with Bright's disease. Bright noticed the hypertrophy of the left ventricle that occurs in chronic renal disease, and attributed it to the impurity of the blood, and to the extra work thus thrown upon the heart, in consequence of the refusal of the tissues to allow a free passage to a substance of which they disapproved. Dr. George Johnson at one time held much the same view, but abandoned it, for what is now well known as the stopcock theory; this supposes that the function of the muscular coat of the arterioles is a controlling one; and that, when blood is ill adapted to the tissues, control will be increased, and the blood shut off more or less from the tissues. Obstruction then must necessarily be created behind, and throw increased work upon the heart, and thus account for the hypertrophy of the left ventricle. As an athlete increases the size of muscles which are constantly used, so does the muscular tissue of the vessels and heart become increased by this extra work that is put upon them. The author and Dr. Dickinson are, however, of the opinion that the function of the muscular coat of the arteries is not a retarding or controlling one, as insisted upon by Dr. Johnson, but rather a propelling one.

To demonstrate this theory, the action of digitalis is brought forward. Digitalis is said to increase the action of the muscular wall of the heart on the one hand, of the arteries on the other; now, if the muscular coat of the arterioles control and retard the circulation, the undoubted diuretic action of digitalis is not easy to explain.

As regards the existence or not of spasm, Dr. Goodhart states that there can be no muscle, and no physiological muscular action, without the risk of the frequent exhibition of morbid muscular action, or spasm; and the assumption of some such spasm in the muscular tissues of the arteries is very agreeable in explaining many of the phenomena of Bright's disease; for instance, the headache and renal asthma are often much relieved by nitrite of amyl and nitro-glycerine, both drugs unquestionably acting by relaxing spasm and promoting dilatation of the peripheral vessels.

The subject next expands in two directions; on the one hand by the hypothesis that chronic Bright's disease is an arterio-capillary fibrosis, or generalised tissue-change, and, on the other hand, by the use of the sphygmograph. Taking the arterio-capillary fibrosis theory first, the author quotes from the paper of Sir William Gull and Dr. Sutton, in which they say 'Old age is not an entity, but a set of conditions predisposing to that state which is called chronic Bright's disease.' Old age is no matter of years and averages, but the running down of a spring set for an individual. It comes at times even to children; and, although chronic Bright's disease is in many cases associated with renal disease, it is not essentially a matter of organs; the generalised change in the tissues of the whole body is the essential, and to some this comes not by kidney chiefly, but by lung chiefly, by brain, by heart, &c. This idea is a suggestive one, and is largely true, but it derives its strength less from the labours of the histologist than from the intuition of experience; to base it upon the non-existence or unimportance of muscular hypertrophy in the arterioles, and to ascribe the thickening which exists, to an essential hyalin-fibroid degeneration, is, in the opinion of Dr. Goodhart, a mistake. There are, no doubt, groups of cases in which the disease in the kidneys is certainly the cause of the changes in the heart and arteries; for instance, in a large proportion of cases of chronic parenchymatous nephritis the heart and arteries are hypertrophied, and this without doubt is due to the kidneys. Again, in some cases, the failure of health and of nutrition will not unfrequently combine so to reduce the arterial tension, as to deprive the circulatory system of any excuse to hypertrophy. These cases are more dangerous than those of granular kidney, because the left ventricle has more tendency to dilate, and thus to relieve the excessive tension, so that the death of the patient often forestalls the hypertrophy of the heart and arterioles.

The author puts forward the following statement with reference to these cases of renal disease. 'In proportion as the renal disease is sudden and severe, so is the risk of dilatation of the heart. The more insidious it is, the more likely is the cardiac hypertrophy to be present in greatest perfection.' Another important point to bear in mind is that, while granular kidney often terminates in cerebral hæmorrhage, the subject of chronic parenchymatous nephritis rarely dies by that means (in lardaceous disease cerebral hæmorrhage is still rarer). At first sight, this would seem to favour the view that the disease of the vessels is a peculiar one, and independent of the nephritis; but it is obvious that dilatation of the heart is unfavourable to the occurrence of apoplexy; it relaxes the tension at the centre which would otherwise be put on at the periphery, and death comes about by cardiac failure, and not by peripheral hæmorrhage.

Concerning the pathology of the arterial changes, and the excess of the hyalin-fibroid material which is observed, together with the atrophy of the muscular coat in the arteries, the author explains his views on the following grounds. The general demand for labour is physiologically responded to by general hypertrophy of all the tissues of the arterial coats, so that not only is there hypertrophy of the muscular coat, but also of the connective-tissue materials of the arterial walls. When this is once established, and the conditions for obtaining supplies are prohibited in any way, then the least organised tissues seem to grow at the expense of—or, as it is termed, by 'sponging' upon—the more highly organised structures; and thus in a case of chronic renal disease of the tissues and vessels it is possible to find vessels conspicuous for their increase of muscular tissue in one part, and in another conspicuous for the increase of their hyalin-fibroid structures.

There is another aspect of the question, which provides ground for belief in the existence of diffused degeneration before any serious mischief can be detected in the kidneys. Ever since the time of Bright, it has been felt that the discovery of albumen in a patient's urine is a late and rough test of disease, and during the last few years several observers have discovered what they consider early manifestations of the disease; but it was Mahomed who taught us more than any one, by his observations with the sphygmograph, how to detect the pulse of high tension. One of Mahomed's most valuable papers on this subject is published in the *Transactions of the Royal Medical and Chirurgical Society* for 1874, and is entitled 'The Etiology of Bright's Disease and the Pre-albuminous Stage.' In it was shown precisely that morbid conditions of the pulse (high tension) precede any evidence of disease in the kidney; and he draws the conclusion from a number of observations, that the vascular condition is the cause of the albuminuria, and not the converse, as had been generally supposed. As early as 1849 Dr. Walshe stated that Bright's disease was not renal, but primarily a blood-disease. Dr. Goodhart next alludes to what he considers the strongest evidence in favour of the generalised nature of the changes which include chronic Bright's disease. It forms the subject of some of Mahomed's latest work in a paper on 'Chronic Bright's Disease without Albuminuria' (*Guy's Hospital Reports*, series 3, vol. xxv.). Dr. Goodhart, however, rejects this nomenclature; and says that Bright's disease, if it mean anything, means nephritis, and suggests that some such title as *arterio-capillary fibrosis* should be used to include all these cases. Of one hundred cases given by Mahomed, seventy-four presented the symptoms of diseases other than renal. The author concludes by making a few remarks on the frequency and practical importance of the effects of pulmonary arterial tension, and alludes to the Lumleian lectures of 1877, in which Dr. George

Johnson entered fully into this subject. With a few well-chosen remarks on the life-work of Mahomed, a most valuable lecture is brought to a close.

RICHARD NEALE, M.D

ARTICLE 4793.

ROBERTS ON FEEDING THE SICK.

In the *Brit. Med. Jour.*, Aug. 1885, p. 181, is published the address given by Dr. W. Roberts at the annual meeting of the British Medical Association. The author takes for his subject the question of regulating the diet of the sick. He commences by dividing patients in a rough sort of way, into two classes; 1, those who are able to take and to digest solid food; and 2, those who can take little or no solid food, but must be fed on a plan widely deviating from the common custom.

With reference to the former class, we must study the variableness of our ordinary English diet, as well as the peculiarities and idiosyncrasies of the invalids' stomachs. In adapting diets to these idiosyncrasies it is better to lessen the quantity of the offending articles than to forbid them altogether. The practice of forbidding fresh fruit and vegetables is especially open to objection. Good cooking and due mastication are most essential to easy digestion. Another matter of great importance is the regulation of the accessories which are used with food. A brief account of many experiments which the author made of the effects produced by these accessories on the salivary and peptic digestion is given. Brandy, whisky, and gin, in moderate dietetic proportions, are regarded as distinctly promotive of digestion. Wines and malt liquors were found to be highly inimical to salivary digestion, unless mixed with an alkali, such as soda-water, seltzer-water, &c. Effervescing wines, other things being equal, favour the speed of peptic digestion more than still wines; but on peptic digestion all wines exhibit a retarding force, altogether out of proportion to the alcohol contained in them. The effects of tea, coffee, and cocoa, show interesting diversities in their action. Tea has an intense inhibitory effect on salivary digestion; even in very minute proportions it completely paralyses the action of saliva. Coffee and cocoa have only a slight effect on salivary digestion. The inhibitory action of tea on saliva is due to the large quantity of tannin contained in tea-leaves. This tannin is dissolved out of the leaves almost immediately after the boiling water is poured upon them; consequently the popular idea of infusing tea for a short period, in order to prevent the passage of tannin into the infusion, is a delusion. A pinch of bicarbonate of soda in the teapot has the effect of removing the deterrent effect of tea on salivary digestion. The effects of tea, coffee, and cocoa on peptic digestion are as nearly as possible alike for infusions of equal strength. All three exercise a retarding effect, when their proportion rises above 20 per cent. of the food taken at a meal.

The author then goes on to consider the question of feeding by means of liquid food. These foods are summed up as follows; milk, beef-tea, and other meat-decoctions, cold-made meat-infusions, raw eggs, and the various gruels. The most serviceable of these is milk; it contains, in almost equal proportions, proteid, saccharine, and fatty matter, and is capable alone of sustaining life. It can be given alone, or mixed with tea, coffee, or cocoa, or with lime-water, soda-water, ardent spirits, or with farinaceous gruels of various sorts, or as buttermilk or whey. Not unfrequently, milk forms into curdy masses in the intestines; this must be obviated by predigesting or peptonising the milk by means of pancreatic extracts. The bitter taste of peptonised milk is disagreeable to many patients, but it can be disguised by adding the extract to iced milk, so that the milk thus charged with the ferment passes into the warm stomach and is there easily digested. Recently, Mr. Benger has introduced a pancreatic preparation, which is absolutely free from taste and smell; this will prove a valuable addition to the methods employed for digesting food, and has found much favour with the author. The next subject considered is beef-tea and other meat-decoctions. In these the author places very little faith, and trusts chiefly to cold-made meat-infusions. Infusions made from minced meat with half its weight of cold water and allowed to stand for two hours, and then pressed through cloth, are found to contain over 4 per cent. of dry albumen. This amount of proteid is equivalent to that contained in cow's milk. When these infusions are made from beef or mutton, they have an unpleasant bloody appearance, but when made from veal there is very little colour. The best preparation is made from the breast of a chicken. These infusions have a raw flavour, which to some is disagreeable, and it is necessary to cover this taste by adding a slice of lemon or a little claret. When made they do not keep long, and must be kept in ice. Another very important kind of liquid food is furnished by gruels made with the several kinds of cereals. If meal be mixed with one-eighth of its weight of ground malt, one can prepare a highly nutritious food, which will still preserve its liquid form. The diastase of the malt acts upon the thickening starch as the heat rises, and converts it into soluble starch and dextrine. These fortified gruels can be prepared with as much as 20 per cent. of meal, and still maintain the fluid state. Such gruels contain about 2 per cent. of proteid matter, and about 14 per cent. of carbo-hydrates, and are admirably adapted, combined with milk or beef-tea, to supply a varied kind of liquid food of highly nutritious character. They are especially suited for cases of typhoid fever.

The author concludes by advising all practitioners to take up the subject of designing food for the sick room, and to study the composition and relative values of the different cereals and leguminous substances used as food. A brief enumeration of the ingredients and apparatus which are necessary for the cuisine of the sick room and nursery, is thus given. 'In addition to the resources of the domestic kitchen and larder, the sick room kitchen should contain a supply of the following flours:—oat, maize, malt, and lentil flours in a finely pulverised condition, and freed from bran. It should be provided with a solution of bicarbonate of soda of known strength. This would be of use to add to milk when necessary, and to assist in the preparation of peptonised articles of food. Next to these would come a reliable pancreatic extract, and a preparation of pepsin or rennet for the production of whey. The associated apparatus should include a thermometer, wherewith the nurse could, when desirable, heat up cold-made meat-infusions to a proper temperature, and regulate the warmth required in the predigestion of food. A double-cased saucepan would form an indispensable item; this makes an admirable hot-water bath for the preparation of beef-tea and fortified gruels. A pair of scales, glass measures, and a mincing machine would complete the list, with a card or sheet giving directions for the preparations of the various kinds of liquid food.' Messrs. Paine and Benger (Mottershead and Co., chemists, Manchester) have put together the above ingredients in a portable form. RICHARD NEALE, M.D.

ARTICLE 4794.

PRINGLE ON THE PREVENTION AND TREATMENT OF ASIATIC CHOLERA.

IN the *Brit. Med. Jour.*, August 1885, p. 377, is published a paper by Surgeon-Major Pringle, in which he gives the result of his experiences during thirty years' service in India. The author confines his remarks to the following heads—(*a*) Preventive measures as affecting the locality; (*b*) Measures during an outbreak.

Under the first heading the subject of sanitary cordons is discussed. They are dismissed as perfectly useless in practice, however good they may be in theory. Then the subject of quarantine is fully entered into; and the author's opinion leads him to state that, if a vessel have been free from an outbreak of a fresh case of cholera for forty-eight hours, it is safe to allow it to leave quarantine. When a vessel from a cholerised part arrives in a port, it should be medically inspected; and if there be any cases on board they should be at once moved to a hospital-ship, whilst the other passengers should be placed in comfortable quarantine for forty-eight hours; then, if no fresh case break out, it is safe to allow them to disperse. With regard to prevention of the disease from spreading when imported into a locality, it is necessary to be always searching for and removing all those conditions, either local or personal, which tend to produce, by means of the air breathed, or water or food taken, derangement of the bowels leading to diarrhœa, or the specific local condition interfering with the biliary secretion, which too frequently results in dysentery. The first measure that ought to be taken during an epidemic is to redouble all exertions in carrying out those sanitary requirements which are necessary to maintain the health of the population. All cases of the disease should be treated in specially located cholera-hospitals. The buildings from which cases of cholera are taken must be thoroughly disinfected, before they can be re-occupied. As regards treatment, nursing is the sheet-anchor, and should be persevered in until death is positively certain. The most successful method of medicinal treatment consists in giving frequently carbonate of ammonia in ten-grain doses, with sulphuric and nitric ether, combined with hot frictions and sinapisms. The most important measure to check the spread of the disease is, to allay the fear caused by the belief that cholera is both infectious and contagious in the same way that small-pox is. The only possible danger to nurses or attendants arises from the risk of overwork, and consequent exhaustion, which brings on a tendency to diarrhœa. With reference to the disposal of the discharges from cholera patients and soiled clothes, it is necessary to subject them to such treatment as will prevent their possibly becoming afterwards a source of infection. It is well known that birds of prey and many kinds of beasts will eat the corpses of cholera-patients with impunity; but this is not a test of the action of the poison upon the human body, and the author says he has no doubt that the dejecta of cholera-patients are the vehicles which contain the cholera-influence.

RICHARD NEALE, M.D.

ARTICLE 4795.

PARANT ON THE TRANSFORMATION OF FEIGNED INTO REAL INSANITY.

DR. PARANT considers (*Annales Médico-Psychologiques*, No. 1, 1885) the question whether the feigning of madness may lead to real insanity. That it should have a tendency to do so will readily be believed. A detected pretender said to Dr. Morel: 'You cannot believe what I have suffered. I thought I should really become mad, and I had more fear of turning insane than of going to prison.' Other pretenders have used words to the same effect; but then, observes Dr. Parant, these individuals have not become mad: they only thought that they were becoming so, and this is not, in our opinion, a sufficient proof of such a transformation.

Renaudin has given the history of an individual who simulated deaf-mutism and imbecility for three years without becoming insane. Dr. Parant cites the following case. On July 28, 1849, a young shepherd was arrested for assault and rape on a girl seven years of age. The day after, he was found in a state of complete fatuity. Two experts charged to examine him declared that he was feigning. Their opinion was based upon the belief that fatuity does not appear so suddenly. Condemned to be imprisoned by the Court of Assizes, he was brought back to prison in the same stupid state, but scarcely was he again in his cell than he commenced to leap with joy for having escaped the punishment of death. He said that since his arrest he had always been quite sane, and that he had simulated fatuity by the advice of one of his fellow-prisoners.

Dr. Parant had an opportunity of observing a man who simulated insanity for more than a year, so that most people around him believed that it was real. By turns he feigned maniacal agitation, imbecility, and epileptic convulsions. Nevertheless, in spite of all these exhausting exhibitions, which were accompanied by marked emaciation, the day he gave up his attempts to deceive he was as active and intelligent as ever. Dr. Parant had information of his conduct up to the day of his departure for New Caledonia—*i.e.* four months after the end of his attempts at simulation. He had gained the good will of the keepers of the penitentiary by his industry, intelligence, and docility, and he even seemed to have a good influence over his fellow-prisoners.

According to Dr. Parant, there are no explicit observations that the simulation of insanity can lead to real insanity. On the other side, there are peremptory facts which prove that a prolonged simulation has in no respect altered the faculties of the pretender. As far as we know, no one ever asserted that the simulation of insanity necessarily leads to real insanity. Supposing that a man, through feigning insanity, in the end fell really insane, it would be difficult indeed to prove that he had not been insane from the beginning. The reporter was once asked to go to Stirling gaol to visit a woman who was certainly trying to feign insanity. It was a matter of dispute between the medical officer of the gaol and the superintendent of the County Asylum, the late Dr. Frederick Skae, whether the woman was really insane. The reporter's own view, to which Dr. Skae gave his adhesion, was that the woman was really insane or weak-minded, but that, not recognising her own infirmity, she feigned madness in a demonstrative manner in order to escape from the punishment of theft. We believe that, though she was never brought to trial, she was detained as long by the superintendent of the asylum and the medical officer of the gaol, as the probable term of her imprisonment if she had been convicted of the offence. W. W. IRELAND, M.D.

ARTICLE 4796.

CANTANI AND SALAMA ON BACTERIOTHERAPY.

PROFESSOR ARNALDO CANTANI publishes (*Giornale Internazionale delle Scienze Mediche*, Fasc. 6, 1885) a paper that may prove to be the commencement of a new era in the treatment of diseases due to micro-organisms.

It is known that micro-organisms, like more highly organised beings, have a struggle for existence. When the supply of food is short, the weakest perishes. In regard to the kind of nutriment also, they present the same peculiarities as we do ourselves : what is food for one is poison for another.

The idea of applying these facts to practical therapeutics occurred to Professor Cantani. He has endeavoured to destroy a pathogenic bacillus by favouring the development of a non-pathogenic hostile bacterium ; and, so far as the experiment has been carried, the result has been strikingly successful.

For his first experiments, he selected the bacterium termo. To determine whether it is innocuous to healthy animals, he caused it to be given to them by inhalation, by the stomach, by the rectum, and by hypodermic injection. Numerous trials on animals of various species showed it to be quite harmless. A tuberculous patient was then chosen for experiment.

The patient, a woman 42 years of age, was received into hospital on April 26 of the present year. She had the signs of a large cavity in the upper lobe of the left lung, cough, and purulent expectoration containing elastic fibres and numerous tubercle-bacilli. Animals inoculated with the sputum became tuberculous. The evening temperature oscillated between 38° and 39° C. The patient lost flesh ; the weight falling from 41·2 to 39 kilogrammes. During this time the patient was taking cod-liver oil, quinine, and other restoratives.

On May 4 every other treatment was dropped ; and daily inhalations of liquefied gelatine diluted with meat-broth, and containing a rich culture of bacterium termo, were commenced by means of an ordinary pulveriser. The expectoration diminished rapidly until it ceased altogether. The tubercle-bacilli gradually became fewer, and were replaced by the bacterium termo. On June 1 the tubercle-bacilli had entirely disappeared, and did not return. The fever in the later days of the experiment did not reach more than 38° C. in the evening ; the body-weight reascended to 39·6 kilogrammes ; the aspect of the patient improved, and the strength increased. After the disappearance of the tubercle-bacilli the inoculation of the sputum in animals no longer rendered them tuberculous.

The general improvement of this patient from the time she was submitted to the inhalation of the bacterium termo is certainly remarkable. It is not yet known whether the bacterium termo is able to penetrate into the depth of the tissues, and so reach the bacilli in the central portions of pulmonary infiltration. It can hardly be expected that the secondary infiltration of distant organs will be amenable to the same treatment ; unless, indeed, direct injection into the blood may attain the end in view.

One case certainly says nothing ; the more so, as outside the organism the bacillus of tuberculosis is not destroyed by the bacterium termo, and the bacterium termo is found spontaneously in pulmonary cavities. The conditions in the present case, however, are different from those in which the bacillus has withstood the bacterium. In the present case a very large quantity of the bacterium was introduced into the respiratory passages with a vehicle, meat-broth, which may favour the development of the bacterium termo, but is less suitable for the vegetation of the tubercle-bacillus.

Professor Cantani does not pretend to have found the best microbe to oppose to the bacillus tuberculosis ; he merely wishes to direct the attention of medical men to a plan of treatment that seems to him to be rational.

[It is just possible that the broth without the bacteria might have done as well.—*Rep.*]

Dr. Salama, of Pisa, reports in the *Giornale Internaz. delle Scienze Mediche*, 1885, an instance in which he successfully treated a case of phthisis by Cantani's method.

It is unnecessary to relate the case in detail. Suffice it to say that the physical signs revealed a large cavity at the apex of the left lung, besides patches of consolidation elsewhere. There was a good deal of fever, and the general downward progress of the case was rapid. The sputum was found to be rich in Koch's bacillus. The diagnosis was in all respects confirmed by Dr. Maffucci, professor of pathological anatomy, under whose care the microscopic preparations were made. It was decided to employ inhalations of bacterium termo spray, although the severity of the case did not offer much hope of amelioration. The bacterium culture was prepared by Professor Maffucci in the following manner. Four or five drops of spring water were put in a sterilised test-tube containing a preparation of meat-broth and gelatine with peptone. After a day or two, various colonies of different micro-organisms appeared on the gelatine. Amongst these was the bacterium termo. Under the microscope, a sterilised platinum needle was dipped into this and transferred at once to the sterilised gelatine preparation. After a couple of days this was found to contain a pure culture of the bacterium termo. A culture prepared in this manner served on the second or third day for one day's inhalations. The contents of the test-tube were mixed with a meat-broth, made with 150 grammes (about 5 ozs.) of lean beef and 200 grammes (about 6½ ozs.) of water, and the whole left for eight or ten hours, according to the temperature (July at Pisa). If left too long the desired putrefaction advances too far, and the remedy becomes insupportable to the patient. With a Siegel's spray-producer, the inhalations are made several times during the day, so as not to weary the invalid.

On July 17, this treatment was commenced. For the first three or four days, no change whatever was observed. On the fifth day, an improvement was noticed. There was less fever. The sputum was not so abundant, and it appeared to be less purulent; it swarmed with the bacterium termo, while the bacillus tuberculosis was notably diminished in quantity. On Aug. 2, the tubercle-bacillus had entirely disappeared. During this time, the patient had been gaining strength and improving in every way. The febrile movement was slight, and the auscultatory phenomena also presented a general amelioration.

[It is obvious that a fortnight's treatment of a case of phthisis cannot carry much weight. Moreover, the patient was told the nature of the remedy, and was very anxious to have it tried; a fact that may suggest a psychical explanation of what, for all one knows to the contrary, may be only a momentary remission of the symptoms. It is right to add that an editorial note in the *Giornale Internazionale delle Scienze Mediche* states that Professor Cantani, since his preliminary communication on the subject, has employed the same treatment with success in other cases. The influence of the absorption of the meat-broth, bacteria apart, by the respiratory passages has not yet been taken into account.—*Rep.*]

WILLIAM R. HUGGARD, M.D.

ARTICLE 4797.

HÖNIGSBERGER ON THE RESPONSIBILITY OF EPILEPTICS.

DR. MAX HÖNIGSBERGER, of Munich, writes on this subject in *Friedreich's Blätter für Gerichtl. Med*, Heft v., 1885.

The question of the legal responsibility of epileptics for their acts is fully discussed by Dr. Hönigsberger, who begins and ends his paper with a quotation from Roller's work on *Mental Unsoundness in its relation to Penal Laws* written more than thirty years ago, that 'there are persons of unsound mind (*Seelengestörte*) in whom the derangement (*Seelenstörung*) is by no means evident, and is recognised with difficulty, but nevertheless exists, and who are convicted and condemned.'

Such are epileptics, in whom the diagnosis of the disease has of late years become more difficult, in consequence of many morbid conditions which have at first sight little or nothing in common with the typical epileptic seizure marked by convulsions and temporary loss of consciousness, having been referred to the same category.

The term epilepsy is applied to: 1, the typical epileptic attack with coma and general convulsions; 2, momentary loss of consciousness without muscular spasms, at least as regards the voluntary muscles; 3, a number of intermediate forms in which the loss of consciousness is but partial, and the convulsions are represented almost solely by twitching of certain muscles or groups of muscles; and 4, irregular forms of attack and of epileptic states.

The first form is easy enough of recognition, but the diagnosis of the others is, in its forensic bearings, often difficult or even impossible in some cases; as for example, when the only visible spasm consists in fixation of the eyeballs, and the mental disturbance does not go beyond giddiness, sparks, or black specks in the field of vision. Prodromata may be entirely wanting, or there may be various kinds of aura; but the mildest attacks may be followed even by several hours of dulness, languor, feebleness of voice, headache, loss of memory, weariness, and inclination to sleep.

The highest interest, however, attaches to those irregular forms which are marked only by vertigo, attributed to the most diverse causes, as disturbances of digestion, congestions, &c., or deemed inexplicable until its epileptoid character is suspected. According to Griesinger, this origin may be inferred when the patient has at any period in his life, even if forty years or more have intervened, experienced any form of epileptic attack or convulsions with loss of consciousness. It is very suspicious when the vertigo seems to ascend from the breast, abdomen, or limbs, is preceded by a sensation of terror, or is attended by movements of the hips or in the throat, or by the muttering of words of which the patient has no recollection; so, too, when such attacks recur daily or frequently with intervals of perfect health, when they occur in bed, and when there is any family history of epilepsy, insanity, or nervous diseases of any kind, of a blow, a fall, or abuse of alcohol.

Hysterical and hypochondriac épilepsy appears mostly in young adults; the symptoms, according to Griesinger, are almost exclusively sensory or psycho-sensory, as lassitude of mind and body, irritability or moroseness, nervousness, anxiety, or embarrassment in reading or writing. Motor symptoms may be entirely absent, but there may be heaviness or pain in the head, deafness, creeping sensations in various parts of the body, &c.

Emminghaus has described some highly interesting cases, in which the epileptic attack was constituted by paroxysms of perspiration, followed by weakness and vertigo, coming on suddenly with or without the least exertion, and lasting but a few minutes. The diagnosis was based on the family history; and he suggests that the heavy perspiration observed in ordinary epileptic attacks is owing rather to vaso-motor paresis than to the muscular efforts involved in the convulsion.

Fischer, Westphal, and Siemens have described cases undoubtedly of an epileptic character, in which the sole symptom was the sudden occurrence of a deep and irresistible sleep, lasting perhaps but a few minutes, without any pallor or other change in the complexion, from which the patient awoke as from a natural sleep, either feeling well or remaining for the rest of the day weak and weary.

Such are some of the manifold forms which epilepsy may take, making the diagnosis extremely difficult; and although it is certain that the mental faculties are often enfeebled or disordered, we cannot always assume irresponsibility, since we know that many epileptics are persons of great mental power. The 51st section of the German Penal Code provides that, 'An act is not criminal when the perpetrator at the time of the act in question was in a condition of unconsciousness, or when such morbid disturbance of the mental faculties existed as to preclude the free self-determination of the will.'

Schüler thus describes the 'epileptic state' which marks the boundary between healthy thought and action and unsoundness of mind; a peculiar state which, sooner or later, is manifested by the majority of epileptics. It consists in an extraordinary irritability, a morbid irascibility easily prompting to acts of violence. It is not unlike that which follows a slight indulgence in alcohol in persons subject to congestion of the brain, and, according to Krafft-Ebing, indicates permanent changes in that organ. The individual is gloomy, suspicious, capricious (*launig*), quarrelsome, and constantly falling out with himself and others, making him a dangerous and reckless opponent. Along with this gloomy, uneasy state of mind, the epileptic constitution is marked by paroxysms of elation, equally restless and uneasy, motiveless, and by no means the evidences of a feeling of satisfaction and comfort. The melancholiac of yesterday is to-day jocose, even boisterous, with as little apparent reason as there was for his previous dejection. Or, again, silence and self-abasement, with a semblance of religious emotion, suddenly take the place of a hard, unfeeling, and contradictory temper.

The intellectual faculties oscillate in like manner, and equally without motive, between indolence and incapacity on the one hand, and exalted activity and forced interest on the other. Everything is irregular and unaccountable. So, too, the acts and conduct, at one time punctual, intelligent, and connected, are suddenly arrested; the patient becomes rough, unfeeling, boorish, and he who was once most conscientious, is in a moment changed into a dangerous thief.

We may generally distinguish between the permanent and the transitory forms of epileptic mania.

The permanent or habitual aberration of mind, or, as Krafft-Ebing calls it, the psychical degeneration of epileptics, is characterised by a progressive enfeeblement of the intellectual functions, through every stage, from mere weakness to absolute dementia; or, in other cases, along with little disturbance of the intelligence, by an alteration in the ethical character leading to brutality, cruelty, and acts of an immoral or criminal nature; or, again, by paroxysms of rage on the slightest provocation, with an exaggeration of the features indicated above, as those of the epileptic constitution; and, lastly, by ideas of persecution, compulsion, hallucinations, attacks of mental distress, and acts of impulse.

Transient epileptic aberrations of mind are obviously of unequal medico-legal interest. Their epileptic character is determined, according to Samt, by their symptoms, development, and course. Although the actual occurrence of epileptic attacks is neither necessary for establishing the epileptic nature of a case, nor in itself sufficient to determine it, Samt holds it an error to look on every insane act of an individual who has at any previous time had an epileptic attack as epileptic, and no less so to refuse to recognise the epileptic nature of insanity marked by what he considers epileptic characters, because the patient has not been an epileptic in the common acceptation of the term.

From this standpoint he distinguishes two principal forms of transient epileptic mania, the post-epileptic and the psychico-epileptic.

The post-epileptic form, the duration of which is usually but a few days, is recognised by the following symptoms; 1. stupor, with or without definite and characteristic reaction, of various grades of intensity; 2. extreme and reckless acts of violence; 3. intense and distressing or exalted delirium, or a peculiar religious mania; 4. various defects of memory; 5. the most diverse phases of delirium, confusion, and partial lucidity, ranging from a dreamy absence of mind on the one hand, up to quasi-delirium tremens on the other.

It usually follows an epileptic seizure, sometimes when the attacks have but recently been developed, but more often when they have recurred for several years, and most frequently after a rapid succession of attacks, especially if they have been suspended for a long time previously. In this last case, two or three days may in some patients elapse between the attacks and the appearance of the maniacal symptoms; in others, they follow immediately on an attack.

The second group comprises the cases of psychico-epileptic insanity, which are distinguished from the post-epileptic in not being preceded by any epileptic antecedents. They are marked by sudden advent, with mental distress and fixed ideas, which may lead to criminal acts, delirium, hallucinations. According to Samt, a characteristic symptom is a period of mental anxiety and dejection following the paroxysm, as in the former class it follows the attacks. This is succeeded by loss of memory; but it is of special forensic interest that this may not appear immediately after the paroxysm, indeed, not until after the lapse of some considerable time.

Among the various forms assumed by the psychico-epileptic insanity is one to which Samt particularly draws attention, and calls the protracted or recurrent. In it the symptoms do not culminate in a paroxysm, but are marked by prolonged recurrence for weeks or even months.

Occasionally, mental disturbances precede the epileptic convulsions. Thus in sixty-three cases Sommer found these præparoxysmal in five, post-paroxysmal in thirty-four, and both in thirteen. In two the psychical equivalent only was present, and in nine the paroxysmal combined with the post-paroxysmal.

Krafft-Ebing considers the peculiar hazy condition marked by dreamy romantic ideas as almost diagnostic. The patient is, he says, in a dreamy confused state of mind not unlike that of a somnambulist, although to all appearances rational, and acting and speaking accordingly. These ideas may lead to wandering, desertion, deception, theft, &c., of which the patient has afterwards a vague recollection only, or none at all. The duration of this state may vary from hours to months. There are persons of this class who have never had typical epileptic attacks, but merely vertigo or mental anxiety.

Cases of chronic epileptic psychosis differ in no respect from, and must be judicially viewed as, other and non-epileptic aberrations of the mind.

The nature and pathology of epilepsy has long been enveloped in obscurity, and it is only within the last few years that light has been thrown on it in some points. We, however, now know enough of the mental condition to justify us in demanding that every epileptic charged with any offence be subjected to a strict medical examination by experts. Not that the mere fact of epilepsy should relieve the individual of all responsibility, for we know that many epileptics are free from any such mental incapacity; but, on the other hand, apparent malice prepense, forethought, and deliberation may co-exist with moral irresponsibility. The examination should be directed towards determining the state of mind of the accused before, during, and after the commission of the act, with a view towards deciding on his responsibility.

An important consideration is the fact, that subjects of the epileptic constitution or psychical degeneration are liable on the slightest provocation to pass the line which separates volition from irresistible impulse. Such a provocation is found, for example, in quantities of alcohol which would have no effect whatever on healthy persons.

The existence of delusions at the time of committing the act should be in the case of epileptics, as of other subjects of mental disease, a ground for acquittal, though the individual may at a subsequent period be rational and responsible. Again, the absence of recollection more or less complete, characteristic of epileptics, if it can be satisfactorily shown that such is not simulated, and especially if there be a previous history of epilepsy, furnishes grounds for acquittal.

But pronounced epileptics may not be subjects of this amnesia. Westphal mentions the case of one who recollected everything that was said during his attacks. [The same may occur during uræmic coma. *Rep.*] Fürstner also has recorded a case in which the mental aberration lasted several days, but the patient had a complete recollection afterwards, and a knowledge of all that occurred even during the attack. Jolly and Rinecker adduce similar instances.

The circumstances of the act may often enable us to decide as to the irresponsibility of the individual, even when there has been no clear history of epilepsy, and when he is afterwards fully aware of the nature of his acts. Legrande du Saulle, for instance, mentions the case of a soldier who, after eighteen years' good service, was employed in the Paymaster's Department. He was occasionally anxious and depressed, declaring that the responsibility of his work was too great; but he would again return to his usual cheerfulness, and say no more on the subject. One day, having made up his accounts, he left the house, went straight to his sister, and, while talking kindly with her, stabbed her in sixty-three places. Taken to the Bicêtre, he could not explain his act, of which he had but a confused recollection. He was deeply penitent, and could not eat. It appeared that he had been subject to nocturnal incontinence of urine, after which he awoke weary. He had consulted several medical men; but the epileptic character of these nightly attacks had not been suspected.

It is certain, however, that carefully contrived and premeditated acts do not exclude an epileptic origin. We may easily imagine the case of an epileptic, who has long entertained a feeling of antipathy towards someone, and had often given evidence of this feeling without having until the fatal moment lost his self-control.

Lastly, the acts of an epileptic—the subject of mental aberration—need not be of a brutal character; the confusion of the mental and moral sense may equally show itself in cheating and theft, perhaps deeply planned, though the individual could not justly be held accountable.

Thus far we have considered the question of the responsibility of epileptics from the standpoint of the criminal law. There remains that of their ability to manage their own affairs, and their right to the enjoyment of personal and civil liberty. Here, again, each case must be decided on its own merits. There are epileptics, as Schnitzler says, who, so long as they evince no signs of mental derangement, must be considered as sane, and not fit subjects for control. With the majority, however, their capacity is doubtful; they are at least weak-minded, and must be kept under supervision so long as the state of aberration continues. Lastly, there are the subjects of psychical degeneration, of whose incapacity there can be no doubt.

E. F. WILLOUGHBY, M.B.

ARTICLE 4798.

TIFFANY ON SUBCUTANEOUS DIVISION OF THE CRUCIAL LIGAMENTS FOR RELIEF OF KNEE-JOINT ANKYLOSIS.*

DR. TIFFANY, the Professor of Surgery in the University of Maryland, has contributed a paper to the Baltimore Academy of Medicine upon the subcutaneous division of the crucial ligaments for relief of ankylosis of the knee; but it appears that what he recommends is really a much more extensive subcutaneous division of tendons and ligaments. It is urged that in young cases, especially after the cure of disease in the knee-joint, the deformity which remains, owing to the displacement of the tibia backwards with rotation, and the flexion due to contraction of the hamstring muscles, presents almost insuperable difficulties in many cases against replacement. As this occurs in young patients where the epiphyses are not firmly united, much force cannot be used, and when gradual extension by means of splints is adopted it is unsatisfactory. He seems to think it is customary to break up adhesions forcibly, but does not make the point he might in substituting this operation for excision, which still finds strong opponents as an operation advisable in such young subjects.

The cases for which the operation is here recommended are those of distorted knee in which all active mischief has long since passed away, and the patient must be in excellent health. The first proceeding is to divide subcutaneously the hamstring muscles, lateral ligaments, and any opposing bands of fascia. When the tenotomy punctures have healed, extension under anæsthesia is made, and the operator will be able to recognise that the failure of the joint to further straighten is due to intra-articular bands, and these, he maintains, are the crucial ligaments, which will not give way by forcible extension such as is safe to use. The anterior crucial ligament being thus made tense, 'the tenotome is passed in on the inner side of the ligamentum patellæ a quarter of an inch above the articular surface of the tibia, and carried backwards and outwards, so as to pass between the tibial spine and the external condyle of the femur below the anterior crucial ligament. The flat of the blade is towards the tibia, the back of the blade towards the ligamentum patellæ, and the edge towards the spine. The knife is now to be carried from side to side across the joint, the edge being directed so as to pass over the spine and divide the anterior crucial just above its attachment to the tibia; the posterior crucial will probably also be divided, but it is wise to turn the edge of the tenotome without withdrawal, pass it more deeply into the joint, and carry it from the internal to the external condyle, retracing the path already travelled.'

If the operation have been successful, the limb can be well extended. The tibia is not to glide forwards upon the condyles to the usual situation; the posterior projection of the head disappears, and the eversion of the foot is lessened. The joint and limb is put up in a gypsum apparatus until all chance of inflammation is passed, when passive motion is to be commenced.

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* *Maryland Medical Journal.*

The depth to which the knife must be passed in depends of course upon the size of the joint; but it was found by experiment upon the dead subject that in an adult male 'the cutting edge of the knife had to be carried two-and-a-half inches below the skin-surface, before the crucial ligaments could be severed.' This apparently refers to the division of both anterior and posterior, and it is very doubtful whether complete division of the posterior ligament would often be required. Dr. Tiffany thinks the blade should be about three inches long, but with a cutting edge about an inch in length, and the end rounded or chisel-shaped with the corners cut off, furnished, however, with a good terminal edge.

He narrates the case of a girl, eleven years of age, in whom the knee was flexed to nearly a right angle, and had been so since she was about two years old. He performed the operation above described. No pain or constitutional disturbance followed. At the end of three weeks passive motion was commenced, and at time of the report (?) the patient was gaining strength and motion. The tibia had not returned to its former position behind the femur, the sole of the foot rested on the floor, and the limb could bear the weight of the body. W. W. WAGSTAFFE.

ARTICLE 4799.

JONES ON COLLES'S FRACTURE.

IN the *Liverpool Medico-Chirurgical Journal* for July appears a very practical paper on the subject of Colles's fracture. It is founded upon a very careful analysis of 105 cases which have come under the author's notice at the Stanley Hospital; and the conclusions arrived at are important, as they differ in some respects from those generally held by surgeons. But these cases do not usually come much under the notice of the hospital surgeon, and therefore the large and carefully utilised experience of one connected with an important provincial hospital is of great value. It is not the extraordinary cases of injury or disease that will prove most useful to the student in his work afterwards as a practitioner; and a paper such as this upon one of the commonest forms of injury which he will have to treat will probably lead to his managing such cases more thoroughly than is often done, and to his carefully noticing the important features of such an apparently simple and common injury.

The symptoms are not specially detailed in this paper. They have been admirably given in Mr. Lucas's paper already noticed in this journal (LONDON MEDICAL RECORD, June 1885). But certain points of interest are separately considered. The action of the muscles in producing and maintaining the deformity has been strongly insisted upon by most writers, and the interesting case which Mr. Couper examined and reported was in direct support of this view. In a paralysed limb there was a Colles's fracture, but by the careful observation of Mr. Jonathan Hutchinson it was noticed that the usual deformity was absent. After death, however, and when rigor mortis had occurred, all the usual deformity was noticed, and the parts could not be reduced by manipulation, nor crepitus produced. To explain this condition, Mr. Robert Jones made the following experimental inquiry. 'I fractured the arms of three patients newly dead, after the method of Gordon. In the first case, I placed the fractured ends of the right radius in good apposition, and allowed the left to lie in the typical deformity. Although rigor mortis set in firmly, no distortion occurred in the right wrist, while the left became but little altered, although difficult to reduce. Reduction, however, did not require nearly the amount of force which was employed by Mr. Couper.' The other two cases experimented upon did not contradict the results arrived at from the first, and he concludes, therefore, that 'muscular action is not sufficient without external assistance to produce the deformity.' He suggests that in Mr. Couper's case the parts may have been displaced during the lifting of the body after death by the porters, and before rigor mortis set in.

With reference to the mechanism of the fracture, the author urges that in the majority of cases it is not by a fall upon the palm of the hand, but rather upon the front of the outstretched fingers, that the injury occurs. This agrees with Professor Gordon's explanation that over-extension of the wrist puts the anterior carpal ligaments and flexor tendons violently on the stretch, wrenching off by the cross-breaking strain the lower end of the radius, and tilting it backwards, with alteration of the aspect of its carpal surface; and this is borne out by the ease with which one can artificially produce the fracture on the dead body by fixing the radius and extending the wrist.

The cause of the pain felt sometimes over the tip of the ulna he thinks due rather to strain of ligaments in this neighbourhood, than to any special involvment of the dorsal branch of the ulnar, as suggested by Mr. Lucas, for it occurs equally after sprains and other injuries.

It is with regard to treatment that the paper is most to be noticed, for many authors who look upon the injury as frequently, if not generally, attended with impaction, confess that it is very often impossible to get the parts into good position, and the results are therefore often most unsatisfactory. The author repudiates this idea, and maintains that it is possible to replace the parts, and without much difficulty to keep them in good position. 'Surgeons generally do not apply nearly sufficient "elbow-grease."' His plan is 'to seize the lower fragment of the radius, use the knee as a fulcrum, draw the lower from the neighbourhood of the upper fragment, and forcibly pronate, keeping the upper part of the radius fixed. Do not let the pull be upon the wrist-joint exclusively, as, apart from the extra pain it gives rise to, the control over the offending fragment is lessened. The great point is to ignore the patient's cries, and make an unrelenting effort to propel the lower fragment not merely in a line with, but in front of the upper. The endeavour will, of course, not succeed; but by attempting a little too much just enough will be done.' He says that, once replaced, the parts will allow of the hand being 'even shaken a bit' when the hand is unloosed, and only in very exceptional cases when the fracture is very oblique will the deformity recur.

He never uses chloroform in recent cases, for the time occupied is always under a minute, generally only ten or fifteen seconds.

The question often treated as very important—viz., the form of splints to be used—he dismisses with the remark that, 'provided reduction has been complete, it does not matter in the least'; and it is only as an extra precaution against the carelessness of patients that special splints are wanted. He recommends a flexible sheet-iron splint, or straight concavo-convex anterior and posterior splints; and these should include the wrist to secure immobility, and be left on for five weeks. But when the splints are removed, 'above all things leave the hand alone, and let the patient do his own exercising.' The use of a Gordon's splint he thinks attended with difficulty, which is an argument against it; and the pistol-splint he has seen followed by many evil results. He does not seem to have used the simple Carr's splint, which has much to recommend it; but, as remarked before, the form of the splint is entirely secondary to complete reduction, which, when once effected and secured, will go more than halfway towards success.

W. W. WAGSTAFFE.

ARTICLE 4800.

HÖGYES ON TWO CASES OF NEPHRITIS FOLLOWING VARICELLA.

DR. HÖGYES, of the Stéphanie Children's Hospital at Buda-Pesth, contributes to the *Jahrbuch für Kinderheilkunde*, Band xxiii., Heft 3, the notes of the following rare cases. The first case was that of a boy, aged 2½ years, who was admitted into the hospital to have a symblepharon operated upon; besides the affection of the eyelids, he had patches of eczema on the face, scalp, and trunk. The latter had from time to time been cured with zinc ointment, but kept returning, so that the operation was frequently put off. On Oct. 25, eleven days after admission, an eruption of varicella, consisting of about thirty spots, appeared; and, as there was at the time an epidemic of varicella in the hospital and city, he was removed to a ward specially reserved for these cases. There was only moderate increase of temperature; the bladders dried up on Oct. 27, and had all scaled off by Nov. 2, and on the 5th the child was returned to the eye section. On Nov. 15 the face was observed to be puffed, and the hands and feet somewhat œdematous. Within the next two days the œdema greatly increased, the child became powerless and somewhat feverish (100·8), pulse rapid and scarcely to be felt; the bladder was impalpable, although no urine was passed for eighteen hours. The abdomen was prominent, but there was apparently no ascites. By means of the catheter a very small quantity of urine was obtained; it was very cloudy, of a reddish-brown colour, and contained a large proportion of albumen. Microscopically it showed granular casts, kidney-epithelium, and blood-corpuscles. The treatment consisted of hypodermic injections of pilocarpin with acetate of potash mixture, but no sweating followed. Towards evening on Nov. 17 the child became much worse; the respiration was rapid, superficial, and sighing. The base of the left lung was dull, with feeble breathing sounds, and occasionally bronchial breathing; above the line of dulness (angle of the scapula) there was fine crepitation. The signs over the right lung was the same, except that there was no bronchial breathing. On Nov. 18, the œdema had greatly increased; the dulness and bronchial breathing were more marked; the face and extremities were cyanotic. Death ensued at midday. *Post mortem*, the kidneys were found very slightly enlarged, nearly bloodless, of moderate consistence; their cortex was reddish-grey, somewhat increased in breadth; their surface was smooth; the section was cloudy and dullish; the pyramids were of a deeper reddish-grey. The mucous membrane of the pelvis and ureters was pale; that of the bladder was covered with ecchymoses; the latter organ contained a small quantity of cloudy pale yellow urine. The microscope showed that the pathological changes were limited to the tubuli contorti and Henle's loops. The epithelium was in great measure destroyed, and the lumina of many tubules completely occupied by granules; the glomeruli were for the most part intact, but near the afferent and efferent vessels a little fibrous reticulation was visible. There was no increase of the intertubular connective tissue, and no micro-organisms could be detected. In conclusion, the author remarks that the eczema could hardly have been a factor in the production of the kidney affection, because it was throughout of only moderate intensity, and was unaccompanied by fever. Varioloid was excluded from the diagnosis, principally from the fact that part of the hospital had to be closed on account of this epidemic of varicella, and that the case resembled exactly those of other children affected.

The second case occurred in the same epidemic, and was that of a girl, aged 7, who was brought to the institution with varicella on Oct. 28. The eruption was rather severe, but was unaccompanied by fever. The vesicles completely dried up on Nov. 3, and the child was discharged cured on Nov. 7. On Nov. 21 she was brought to the hospital with swollen face and feet. No physical change could be made out in the internal organs.. The urine was dark yellow, acid, somewhat cloudy, and largely albuminous. The microscope showed finely granular casts and kidney-epithelium. Acetate of potash was ordered. Up to Nov. 25 the œdema continued about the same; the daily quantity of the urine was 420 cubic centimètres. On the 26th it was 800, and on the 28th 1,200 cubic centimètres. The quantity of albumen was at the same time notably diminished, and the microscopic appearances became normal. On Nov. 30 the child complained of pains in the joints, and the temperature rose from normal to 105°·8; but, under the influence of salicylate of soda, the pain and fever rapidly subsided. Another transient arthritic attack took place on Dec 9. On Dec. 12, there was complete disappearance of all symptoms of nephritis; the urine was abundant; no albumen.

The two cases above given show—1, that nephritis may follow varicella; 2, that the nephritis may be very severe; 3, that it may appear from five to twenty-one days from the commencement of the eruption.

RALPH W. LEFTWICH, M.D.

ARTICLE 4801.

KORKUNOFF ON THE EXCRETION OF ALBUMEN IN NEPHRITIS.

DR. ALEXANDER P. KORKUNOFF'S able and interesting work (*St. Petersburg Inaugural Dissertation*, 1884, p. 64), embodying the results of prolonged and extensive observations at Professor V. A. Manasseïn's clinic, consists of two parts, the first of which studies the excretion of albumen in urine of chronic nephritic patients by day and by night, during rest and during exertion. The results drawn from this group of observations may be summed up thus.

1. The absolute daily amount of albumen excreted

during days of exertion is larger than that during days of rest.

2. The daily percentage of albumen in urine is also less during rest than during exertion.

3. The absolute amount of albumen in urine is larger by day than by night, during both days of exertion and those of rest.

4. The same may be said of the percentage of albumen. At the same time, it must be stated that under rest the percentage decreases by day in a considerably greater degree than by night; hence, on days of rest, the difference in the percentage between daytime and night-time is less considerable than on days of exertion.

5. A comparison between the absolute amount of albumen excreted during daytime under exertion, and that under rest, shows that in the latter case the amount is considerably lesser; the same may be said of albumen excreted during night.

6. Notwithstanding the fullest possible attempts to preserve identical conditions during individual observations, the excretion of albumen presents considerable variations both under rest and exertion, which circumstance, in all probability, depends upon the interference of other influences, such as mental state, depth of sleep, &c., their equalisation lying beyond our control.

We may mention as well several other facts obtained by Dr. Korkunoff in the course of this series of observations on chronic nephritic patients. They are these.

1. Under exertion, the amount of urine is larger by night than by day; under rest, the difference is effaced, or even inverted.

2. During exertion the daily amount of urine is, as a rule, larger than during rest. On the other hand, when we compare the amount of urine excreted with the amount of water ingested by the patient (that is, when we estimate how many cubic centimètres of urine are excreted to each hundred cubic centimètres of water taken), we find that during exertion, while the patient drinks more water, he excretes relatively smaller amounts of urine; on the contrary, under rest, the amount of urine is larger than the amount of drink. In other words, exertion brings about an increase in the loss of water by the skin and lungs, while during rest the largest part of the water taken is filtered through the kidneys.

3. During exertion, specific gravity of urine is higher by daytime than by night, the difference being less marked and sometimes even inverted under the influence of rest.

The second part of the author's work describes the outcome of his observations on the excretion of albumen in chronic nephritic patients under the influence of the sudorific treatment by warm baths, with subsequent packing in blankets. The patients were put in bed three days before the observations, and remained there during the whole time of the latter. Each observation lasted eight days, for four of which the patient remained without any treatment, and for the next four took daily two baths of 31° Réaum. (101°·75 Fahr.) each of half an hour's duration.

From this series of observations, Dr. Korkunoff draws the following conclusions.

1. The absolute daily amount of albumen in urine in bath-days is mostly (in four of six cases) smaller than in days without baths.

2. The per cent. amount of albumen also lessens under the influence of baths.

3. The weight of the body invariably decreases, the decrease being proportionate to the amount of dropsy present; that is, the more dropsical the patient is, the more considerable is the loss in his weight.

4. The amount of urine invariably lessens, but the specific gravity of the latter increases, in spite of the fact that the amount of water ingested by the patient during the diaphoretic treatment is always larger.

5. The loss of water by the skin and lungs is considerably increased by the sudorific treatment.

In all the cases, dropsy rapidly disappeared or greatly diminished under the use of baths. From the fact that the absolute and per cent. amount of albumen is diminished by the diaphoretic treatment, the author deduces the practical corollary that warm baths act not only symptomatically, but also produce a favourable influence on the morbid process in the kidneys: for, by their diminishing the excretion of albumen, they stop the progress of general exhaustion of the patient, and relieve the irritation caused to the kidneys by the egress of albumen. [The preliminary notes of the work were published by Dr. Korkunoff in the *Vratch*, 1883, No. 43, p. 723, and 1884, No. 18, p. 300. In regard to the curative effects of the diaphoretic treatment in nephritis, Dr. Korkunoff confirms the statements of his predecessors, like Osborne, Forget, Leube, Ziemssen, Bartels, Demiankoff. The work of the latter was published in Botkin's *Archiv Vnutrennikh Boleznei*, 1879, Vol. v., Fasc. 2.—*Rep.*] V. IDELSON, M.D.

ARTICLE 4802.

SMIRNOFF ON THE INFLUENCE OF IODIDES OF ALKALIES ON THE NITROGENOUS METAMORPHOSIS.

NOTWITHSTANDING the fact of iodine and its salts being extensively used in daily medical practice all over the world, and notwithstanding a general acceptation of the view that the favourable therapeutic action of iodine and iodides (in syphilis, goître, scrofula, rheumatism, mercurial and saturnine poisoning, malarial affections, &c.) is dependent upon the drugs being endowed with a property of altering the course of systemic metamorphosis and nutrition, literature contains strikingly scanty and contradictory data bearing on the subject. Experimental researches are absent altogether, while clinical observations almost exclusively concern syphilitic subjects, who surely cannot be regarded as a fit material for observations tending to elucidate the influence of iodides on the metamorphosis. [As a matter of fact, Stepanoff, in his *St. Petersburg Inaugural Dissertation*, 1875, and Vajda, in the *Vierteljahr. f. Derm. und Syph.*, 1875, Fasc. 2 and 3, proved that the syphilitic process itself produced various alterations in metamorphosis.] Handfield Jones found that iodide of potassium increased the amount of water, and of phosphoric and sulphuric acids and chlorine in urine. Rabuteau came to the conclusion that iodides of alkalies diminished the daily amount of urea in urine, and generally lowered the bodily metamorphosis. Milanesi confirmed Rabuteau's results. Hermann von Boeck deduced from his experiments (on a syphilitic patient) that iodine had no essential action on the decomposition of proteids in the body, but could act on proteids of tissues ('organised proteids'). Buchheim seemed to think that iodides diminished the waste in the system and improved the general nutrition. V. J. Dybkovsky (*Lectures on Pharmacology*, Kiev, 1878, p. 274) stated that iodides of alkalies invariably increased the amounts of water, chlorides, and indigo, and markedly decreased those of urea, sulphates, phosphates, and uric acid in urine.

In view of this conflict in scientific evidence, as well as in view of absence of any experimental researches into the subject, Dr. A. Smirnoff, one of the assistant-physicians in Professor S. P. Botkin's clinic, has undertaken a series of experiments to study the influence of iodides on the general nutrition, growth, and development of young animals. The author has published as yet only the results of his investigations into the action of iodides of alkalies on the nitrogenous metamorphosis (*St. Petersburg Inaugural Dissertation*, 1884). The animals (young dogs) experimented upon were fed only on meat, and received either iodide of sodium, in daily doses of eight grammes, or iodide of potassium, in five-gramme doses, dissolved in water, for thirteen to thirty-two days. In one group of the experiments, nitrogen was determined by means of combustion, after Wiel and Varentrapp's method; in another, urea, as well as phosphoric and sulphuric acids were estimated by usual methods of quantitative analysis. The results obtained by Dr. Smirnoff may be given thus.

1. Iodides of alkalis undoubtedly increase disintegration of the proteids of the body; hence an increase of nitrogenous products, as well as of phosphoric and sulphuric acids, is observed; the general systemic nutrition falls, and there appears wasting of the body.

2. Under prolonged use of iodides, the assimilation of nitrogenous elements of the food decreases.

3. The digestive function of the gastric juice fails, though the quantity of the juice remains unchanged.

4. Under prolonged use of iodides there appears albuminuria (on the sixteenth, twenty-sixth, and thirty-second days).

5. Iodine is not eliminated from the body very quickly, as is generally supposed; it may be stored in the system and eliminated only gradually. [In one of the experiments iodine entirely disappeared from the urine only on the fourteenth day after its ingestion; in another, only on the twenty-second.]

6. Iodides of alkalies seem to have no irritant action on the gastro-intestinal mucous membrane. [The same was asserted by Pelikan, in his *Forensic Observations, Experiments, and Researches*, St. Petersburg, 1856.]

Considering the experimental data above in connection with clinical facts, Dr. Smirnoff comes to the conclusion that a favourable therapeutic action of iodides in syphilis, goître, scrofula, &c., cannot be explained exclusively and directly by an increase of nitrogenous metamorphosis in consequence of the administration of the drugs; the explanation is to be sought rather in the fact that iodine, being introduced into a diseased system, acts before all and most intensely on morbid products which are less durable and more easily yield to all possible influences than normal tissues of the animal system.

V. Idelson, M.D.

Article 4803.

POPOFF ON THE PHARMACOLOGICAL ACTION OF KAIRIN.

To study the action of kairin on the animal system, Dr. L. M. Popoff (*St. Petersburg Inaugural Dissertation*, 1885) undertook experiments on frogs and dogs in Professor P. P. Sushtchinsky's pharmacological laboratory. The conclusions at which he arrived are these.

1. Kairin is a blood-poison which acts mainly on the blood-corpuscles, destroying their hæmoglobin, and partly on the plasma, increasing its coagulability (the latter effect is caused by the passage of the products of decomposition of hæmoglobin from blood-corpuscles to the plasma).

2. At the same time, kairin is a cerebro-spinal poison which excites the cerebral centres and paralyses the transmissory (reflex) centres of the spinal cord.

3. Under the influence of the drug, the cardiac action first becomes slower, but subsequently shows an increase in frequency, the retardation being dependent upon exhaustion of the excito-motor cardiac ganglia and, probably, also, upon irritation of the inhibitory ganglia. The acceleration is caused by excitation of the central ends of the accelerating fibres of the pneumogastric nerve.

4. The arrest of the cardiac contractions, as observed in kairin poisoning, can be explained only by paralysis of the motor cardiac ganglia.

5. Respiration shows retardation, which is caused by paralysis of the respiratory centres. It is arrested before a complete cardiac paralysis is established.

6. The arterial tension, generally, markedly sinks below the standard. At the same time, it rises on acceleration, and decreases on retardation, of the cardiac action. The fall of the blood-pressure is dependent on the failure of propulsive energy of the cardiac muscle.

7. The loss of motion which is observed in the animal poisoned by kairin is of central origin.

8. The motor nerves with their endings remain intact, with the exception of the splanchnic nerves, of the inhibitory fibres of the vagi, and, possibly, of other similar nerves, the peripheral endings of which are paralysed by the poison.

9. The peripheral endings of the sensory nerves, after a transient excitation, are paralysed by kairin. The loss of sensibility is obtained on the introduction of the drug, both directly into the blood and under the skin; in the latter case, local anæsthesia around the spot of the injection is especially pronounced; the injection itself, however, is always painful.

10. The cardinal effect of kairin is decrease of the bodily temperature.. Kairin depresses both the normal and the febrile temperature. The temperature in septic fever yields to kairin more easily than that in inflammatory fever, the normal temperature showing the greater resistance to the drug. The fall of the systemic temperature is dependent on a decrease in the process of combustion in the body.

11. The lesions of the tissues and blood are not durable, the animal rapidly recovering after elimination of kairin from the blood (either with urine or by venesection).

12. The fact that animals tolerate repeatedly administered pharmacological doses of the drug, without any palpable harm to their system, finds its explanation, first, in rapid excretion of kairin with the

urine, and secondly, in a relative smallness of the said doses, which may destroy only insignificant quantities of hæmoglobin. To destroy the whole hæmoglobin, it would be necessary that the blood contained more than 20 per cent. of kairin. Meanwhile, the largest therapeutic doses of the drug cannot decompose even one hundredth of the hæmoglobin present in the blood.

13. Large individual doses may be dangerous, since they inhibit the secretion of urine, and thus interfere with the process of effacing the lesions produced by the drug. On the contrary, small individual doses increase the secretion of urine, and thus enable us to repeat them at certain intervals, without any risk of accumulation of the drug in considerable quantities. V. IDELSON, M.D.

ARTICLE 4804.

SHURINOFF ON THE PHARMACOLOGICAL ACTION OF BERBERIN.*

WHILE Dr. A. J. Slavatinsky studied, in Professor P. P. Sushtchinsky's laboratory, the physiological action of hydrastin, one of the alkaloids of the root of hydrastis (*see* the LONDON MEDICAL RECORD, Nov. 1884, p. 498), Dr. Mikhail A. Shurinoff was, in the same laboratory, occupied with investigations concerning the pharmacological properties of another alkaloid of hydrastis; namely, berberin (*St. Petersburg Inaugural Dissertation*, 1885).

The root of hydrastis Canadensis contains from 1·6 per cent. (Lloyd) to 4 per cent. (E. Schmidt) of alkaloid with the formula $C_{20}H_{17}No_3$. For his experiments the author used Merk's sulphate of berberin, which he subjected to purifying recrystallisation from a hot filtered solution in a water-bath. The salt forms small golden-yellow crystallised needles, which are soluble in fifty parts of cold water, the solution being of a neutral reaction and of golden colour with a reddish hue. He employed 1 or 2 per cent. solutions, which in frogs was injected under the skin or into the lymphatic sacs, and in dogs and in rabbits into the external jugular or saphenous vein, or hypodermically. It was found that, for the frog, the hypodermic fatal dose of sulphate of berberin began from 2 centigrammes, and the intralymphatic, from 1 centigramme; for the dog, the fatal hypodermic or intravenous dose was 5 centigrammes per kilogramme; rabbits died (in 36 hours) from an hypodermic injection of 0·1 gramme per kilogramme. The essential results of the author's experiments are as follows.

1. Berberin paralyses the peripheral endings of the vagus nerve in the heart; hence an acceleration of the cardiac action ensues. The period of acceleration is rapidly followed by retardation, which may be explained by restitution of excitability and normal tone of the vagi when moderate doses are used, and by exhaustion of the excito-motor cardiac ganglia and the cardiac muscle itself when fatal doses are administered.

2. A most characteristic feature of the physiological action of berberin is the fall of the arterial tension, which usually begins from the moment of the injection, and, in fatal cases, gradually and steadily sinks to zero; on the use of non-fatal doses it regains its normal level within an interval which is determined by the amount of berberin employed. The lowering of the blood-pressure is caused by a paralysing action of berberin on both the central and peripheral vaso-motor nerve-apparatus, and by failure of energy of the cardiac muscle in consequence of paralysis of the peripheral endings of the pneumogastric.

3. The alkaloid excites the respiratory centres, hence breathing becomes quickened as well as superficial. Toxic doses paralyse the respiratory centres.

4. Berberin paralyses tactile and pathic sensibility, their loss being dependent upon inhibition of the conducibility of the sensory nerves and of the reflex action of the spinal cord.

5. The drug increases peristaltic movements of the gastro-intestinal tracts and produces vomiting, the phenomena being of a central origin.

6. Berberin is eliminated from the system, probably through the kidneys. In a dog, the mucous membrane of the renal pelves was found stained with yellow colour.

7. The alkaloid does not possess any ecbolic action.

In view of the fact that hydrastin does not change the arterial tension (Slavatinsky), Dr. Shurinoff comes to the conclusion that decrease of the blood-pressure produced by extract of hydrastis (Fellner) depends on berberin. Though unable to attribute any ecbolic property to berberin or to hydrastin, the author does not deny the therapeutic value of hydrastis in cases of uterine hæmorrhage, and feels inclined to ascribe good effects of the drug to the lowering of the blood-pressure caused by the alkaloid under consideration.

V. IDELSON, M.D.

ARTICLE 4805.

FEINBERG ON THE ACTION OF CUCAINE ON THE CEREBRAL CO-ORDINATING CENTRES.

THE general effects which had been observed in themselves by Messrs. J. H. E. Brock and C. J. Arkle, of London, in the course of their experiments on the hypodermic injection of cucaine (*see* the LONDON MEDICAL RECORD, April 1885, p. 133), led Dr. Feinberg to undertake an experimental inquiry into the general action of the drug on the system as well as into its action on the exposed nerves. The outcome of these experiments, which mainly consisted of hypodermic injection of cucaine into rabbits, is this (*Vratch*, Nos. 27 and 29, 1885).

1. Being brought into contact with an exposed nerve, cucaine temporarily destroys its sensibility. [A 5 per cent. solution of hydrochlorate of cucaine was used, a few drops of which almost instantly produced complete anæsthesia of the peripheral part of the nerve, the great sciatic being exposed.]

2. Being injected under the skin, cucaine brings about general phenomena which vary according to the dose used.

3. A hypodermic dose of half a grain produces, beside local anæsthesia, also anæsthesia of the eyeballs, lips, cheeks, tongue; further, protrusion of the eyeballs, elevation of the eyelids, partial or complete loss of the reaction of the pupil to light (while palpebral reflex remains intact).

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* SHURINOFF, MIKHAIL A.—A Contribution to the Study of Pharmacology of Berberin, as one of the Alkaloids of the Root of Hydrastis Canadensis. (*St. Petersburg Inaugural Dissertation*, 1885, pp. 50.)

4. In the same dose it quickens respiration, which becomes at the same time superficial.

5. It produces loss of co-ordination of movements.

6. It also gives rise to rotation of the head from the right to the left, associated or not with trembling of the eyeballs.

7. In subcutaneous doses of one to two grains, cucaine produces, besides the phenomena enumerated above, tonic contractions of the occipital muscles and clonic contractions of the limbs, and, sometimes, of the upper lip and tongue.

8. Consciousness is darkened.

9. The pupillary reaction disappears altogether.

10. But this reaction remains preserved in a slight degree, when the injection of the drug has been preceded by the division of the cervical sympathetic nerves.

11. Under larger doses, the phenomena of discoordination usually last longer than on the use of smaller doses.

Analysing the results above and confronting them with anatomical researches of Meynert, and physiological experiments of Ferrier, Serres, Cayrod, Goltz, Knoll, Schöller, &c., the author comes to the following conclusions. 1. Cucaine, being absorbed into the blood, concentrates its anæsthetising action on the sensory tracts in the optic thalami and corpora quadrigemina, and thus causes disturbance of co-ordination. 2. In larger doses, cucaine excites the motor tracts of the same structures, and thus gives rise to convulsive movements which present a striking likeness with those obtained by Ferrier from stimulating the corpora quadrigemina. 3. The predominance of anæsthesia in the region of the fifth nerve, is explained by the fact that one of its roots originates from the nerve-cells situated around the Sylvian aqueduct. 4. The dilatation of the pupils, protrusion of the eyeballs, and elevation of the eyelids, are dependent upon the stimulating action of cucaine on the sympathetic nerve.

V. Idelson, M.D.

Article 4806.

JANOVSKY ON THE ACTION OF BUTYRIC ACID ON THE KIDNEYS AND NERVOUS SYSTEM.

In his work on septic nephritis (*Die Septische Nephritis*, Breslau, 1868) Dr. H. Fischer alleged that butyric acid, as one of the products of decomposition of pus, may produce nephritis; at the same time, he adduced some experiments of his own with the intravenous injection of the acid in dogs, which seemed to support his views. Rassmann and Köbert, however, who injected from six to ten cubic centimètres of a 10 per cent. solution of butyrate of soda into the veins of rabbits, were not able to find any traces of inflammation in the kidneys. Similarly, O. Weber (1864) injected from 2½ to 10 minims of butyric acid into the veins of rabbits and cats, and found only slight hyperæmia of the organs.

The question being of considerable practical importance (in consequence of the presence of butyric acid in some food-articles, various drugs, systemic fluids in morbid state, &c.), Dr. Mikhail Janovsky undertook, at the suggestion of Professor S. P. Botkin, an experimental inquiry into the action of butyric acid on the kidneys, as well as on the nervous system (*St. Petersburg Inaugural Dissertation*, 1884, pp. 37). To examine the effects of the acid on the kidneys, the author administered it either internally (to rabbits), in the doses of 30, 50, and 75 cubic centimètres of a 1 or 2 or 3 per cent. solution; or intravenously (to dogs), in the doses of 50 cubic centimètres of a 2 or 3, 6 or 8 per cent. solution, daily or every other day. As far as nephritis was concerned, the results were entirely negative. The intravenous injection of large doses sometimes brought about temporary hæmoglobinuria, with albuminuria, albumen in the urine invariably appearing and disappearing simultaneously with hæmoglobin. No morphological elements were ever found, the renal tissues remaining normal, both macroscopically and microscopically.

In the course of this series of experiments, it became evident that the ingestion or injection of butyric acid produced in animals a kind of intoxication or stupor, with loss of standing and walking power. The same results were obtained from the intravenous injections (in dogs and rabbits) of butyrates of sodium and lithium, in the shape of a 15 or 20 per cent. solution. Doses of 1·5 to 2·0 grammes per kilogramme of the animal's weight invariably produced a marked stupor, the animal lying, with half-opened eyes, in most uncomfortable postures. Reflex action, however, remained intact. On receiving smaller doses, the animal could walk with a tottering, shaky gait, dragging its legs and falling down at every step. The doses under 0·5 per kilogramme produced no marked effect on the dog. Controlling experiments with bromide and chloride of sodium, and lactate and acetate of soda, proved that the depressing action on the nervous system was due only to butyric acid. A third group of experiments (on frogs, rats, and dogs) showed that butyrates had no depressing action on reflexes, the respiratory centre, and muscular irritability. Excitability of the psycho-motor centres fell only under large doses, while stupor occurred also under far smaller doses, and, at all events, long before failure of psycho-motor excitability. Hence the author concludes that butyric acid induces stupor by its paralysing influence on 'some higher, possibly the ultimate regions of the brain'; and hence, also, the author proposes to try butyrates 'as a remedy for those nervous affections, which are characterised by an agonisingly rapid flow of ideas.'

As a hypnotic, butyric acid may be given to man in about four-gramme doses, and butyrate of soda in about five-gramme ones. [The fatal dose of the butyrate for the rabbit is 5 grammes; for the dog, about 25 grammes; and for man, probably, about 15 grammes.]

In conclusion, Dr. Janovsky remarks that, though butyric acid does not possess any powerful physiological action, still it may be present in the human system, under certain morbid conditions, in quantities which allow it to display its depressing effects. [As a matter of fact, Schottin twice found in vomited matter about 5 grammes of the acid.] It is not impossible that mental depression, as observed in cases of gastric catarrh (especially in connection with dilated stomach), jaundice, and habitual constipation, is caused by the development of large amounts of butyric acid in the gastro-intestinal tracts. Again, butyric acid may be the cause of irresistible drowsiness occurring after heavy dinners, or after the liberal meal of sour cabbage or sour cucumbers (which dishes are much favoured by Russian peasantry, and, as Professor V. V. Pashutin has shown, contain large quantities of butyric acid).

In another paper, published in the *Ejened. Klinitch. Gazeta*, No. 14, 1884, p. 221, Dr. Janovsky reports some experiments on dogs, carried in Professor Botkin's laboratory, in order to ascertain whether butyric acid presents any qualitative or quantitative difference from its homologues as regards its soporific action. Various sodium salts were injected into the femoral vein, in the form of a 10 per cent. solution. Acetate of soda, in the dose of 3·65 grammes per kilogramme of the animal's weight (corresponding to 2·7 grammes of acetic acid) did not produce any stupor or sopor, but killed the animal in an hour and a half. Propionate of soda, in the dose of 3·4 grammes (2·5 grammes of propionic acid) gave rise to sopor in half an hour, and killed the dog in three hours. The sopor, however, was not so deep as in the case of butyrate of soda, which produced the state after an injection of one gramme per kilogramme, the animal remaining alive. From these results the author draws the conclusion that, 'as regards salts of volatile fat acids of normal structure, their soporific action increases with the molecular weight of the acid.'

The author examined, also, the action of sodium salts of two iso-acids, of isobutyrate and isovalerianate of soda; 2·0 grammes of the isobutyrate (corresponding to 1·58 gramme of isobutyric acid) caused only prostration, but no sopor; 2·0 grammes of the isovalerianate (1·62 of isovalerianic acid) produced a state of sopor, the animal remaining alive. Hence the author concludes that, as 'regards the action on the nervous system, iso-acids form an independent series, each member of which acts less energetically than its normal isomer; but, within a given series, the member which contains a larger number of atoms of carbon acts more energetically than those members which contain a lower number of atoms of carbon.' V. Idelson, M.D.

Article 4807.

SMIRNOFF ON THE ACTION OF SULPHURETTED HYDROGEN.*

Following the suggestion of Professor S. P. Botkin, Dr. G. A. Smirnoff undertook (*St. Petersburg Inaugural Dissertation*, 1885, p. 148) extensive experimental researches on the physiological and toxicological action of sulphuretted hydrogen on the animal system. To study the influence of the gas on respiration and circulation, animals (dogs and rabbits) were subjected to tracheotomy, and made to inspire various mixtures of sulphuretted hydrogen with air or oxygen, enclosed in large (about 72 litres) India-rubber bags. In another series of experiments, a saturated aqueous solution of the gas was injected into the femoral veins. The results obtained by the author may be summarised thus.

1. Inhalation of air containing from $\frac{1}{12}$ to $\frac{1}{9}$ per cent. of sulphuretted hydrogen does not give rise to any toxic phenomena, the respiration becoming somewhat deeper and slightly retarded.

2. Inhalation of a mixture containing from $\frac{1}{8}$ to $\frac{1}{6}$ per cent. of the gas produces classical Cheyne-Stokes' phenomenon. Within one or two minutes the animal shows restlessness, which is followed by short paroxysms of general convulsions; then the respiration becomes extremely dyspnœic, but soon begins to gradually grow weaker, and stops in expiration. After half or one minute's pause, it reappears, gradually increases in strength to dyspnœa, &c. During the pause, the pupils become widely dilated and reactionless; the cornea insensitive; with the re-appearance of breathing, the eye returns to its normal state.

3. Division of the vagi and also of the laryngeal nerves does not in any way interfere with the Cheyne-Stokes' phenomenon.

4. Arterial tension falls with the arrest of breathing, remains at one and the same low level during the pause, and returns to the standard with the re-appearance of respiratory movements. The cardiac action invariably shows a considerable retardation during the pause. The retardation does not occur in animals with the vagi divided; the arterial tension, however, presents the same oscillations as in animals with the pneumogastric nerves intact.

5. Inhalation of a mixture containing from $\frac{1}{6}$ to $\frac{1}{4}$ per cent. of sulphuretted hydrogen brings about at first the same periodical breathing, but with considerably lengthened pauses; then the periodicity is replaced by equable and slow respiratory movements; the respiratory intervals grow longer and longer, and lethal arrest of the respiration pretty rapidly ensues.

6. Substitution of oxygen for the air in the gaseous mixtures inhaled does not diminish the toxic effects of sulphuretted hydrogen.

7. Intravenous injection of water saturated with the gas causes either dyspnœa, or a single more or less prolonged arrest of respiration, after which the animal again breathes regularly.

8. Spectroscopic examination of the blood taken from the animal, in the absence of air, during all the phases of the toxic action of sulphuretted hydrogen, detects invariably only two oxyhæmoglobin bands, the characteristic absorption-band being absent even in the blood examined after death. This absorption-band may be obtained only after a solution of hæmoglobin has been for an hour treated with a stream of the gaseous mixture containing about $\frac{1}{5}$ or $\frac{1}{4}$ per cent. of sulphuretted hydrogen. [Thus, Dr. Smirnoff confirms the results of spectroscopic analysis, published in 1865 by Kaufmann and Rosenthal.] In other words, the animal dies before the poison has succeeded in depriving the blood of its oxygen. Hence, the cause of all the respiratory phenomena described above must be sought in a specific action of sulphuretted hydrogen on the respiratory centre, which action manifests itself first by stimulation, and then by depression and ultimate paralysis of the said centre.

9. On injecting water, saturated with sulphuretted hydrogen, into the veins of a normal (that is, non-curarised) animal, the blood-pressure considerably rises; it sinks at the moment of stoppage of the respiration, and remains at a low level up to the moment of the return of breathing, when it again returns to the standard.

10. As is mentioned in sect. 4, in the animal with the vagi divided, retardation of the cardiac action does not occur when small doses are used; but it does occur under large doses (though in a less degree than in the animal with intact vagi), even in an animal poisoned by atropine.

11. In curarised animals, the arterial tension rises both from injection of sulphuretted hydrogen water and from inhalation of the gaseous mixture.

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* Smirnoff, G. A.—On the Action of Sulphuretted Hydrogen on the Animal System, with some Data concerning Pathology of Cheyne-Stokes' Respiration (*St. Petersburg Inaugural Dissertation*, 1885, p. 148). A Preliminary Note on Ditto (*Ejened. Klin. Gazeta*, 1884, No. 28, pp. 433-6).

12. In animals with the splanchnic nerves divided, the rise of blood-pressure is less than in the normal animal, which circumstance may be explained by severing the connection between the vaso-motor centres and peripheral vessels.

13. On injecting sulphuretted hydrogen water into animals with the splanchnic nerves divided, the arterial tension at first sinks and then rises. On the inhalation of the gaseous mixture, there is observed only a fall of tension, a rise occurring only after replacing the mixture with common air.

14. Neither the level at which the spinal cord is divided, nor simultaneous division of the splanchnic nerves, changes the phenomena mentioned in sect. 13; facts which exclude any participation of the spinal nervous centres.

15. On inducing asphyxia (through arresting artificial respiration) during the first stage of the action of sulphuretted hydrogen water, the arterial tension does not rise; and when large doses are administered, it even continues to fall, in spite of prolonged stoppage of the artificial respiration.

16. Faradisation of the peripheral ends of the splanchnic nerve in an animal with the spinal cord divided, being performed at the moment of the arterial tension sinking under the influence of sulphuretted hydrogen, gives a less rise of the tension than under normal conditions.

17. On establishing artificial circulation through an isolated limb, it is seen that blood mixed with sulphuretted hydrogen causes considerable dilatation of the vessels.

18. On considering the data embodied in the statements 9 to 17, it becomes evident that sulphuretted hydrogen acts on the vaso-motor centres quite otherwise than on the peripheral vaso-motor system; while one series of experiments shows that the blood-pressure strikingly rises, the rise being dependent mainly upon the excitation of the vaso-motor centres by the gas, another series carried on under the removal of any influence of the nervous centres showed that the blood-pressure always sinks from the action of the gas, and that the fall is caused by paralysis of the peripheral vessels. The explanation of those apparently contradictory results is, probably, this: sulphuretted hydrogen possesses a specific action on the nervous system; hence its stimulating influence on the vaso-motor centres with a subsequent rise of the arterial tension; but, at the same time, the gas is endowed with the power of reducing hæmoglobin; now, from Mosso's experiments we know that a reduced blood always causes dilatation of the vessels; hence, when any influence of the nervous centres is removed (by division of the spinal cord, &c.), the reducing property of sulphuretted hydrogen steps in the action, blood-vessels undergo a dilatation, and the blood-pressure subsequently falls.

Dr. Smirnoff studied, also, the chronic action of the gas (both in toxic and in therapeutic small doses) on nitrogenous metamorphosis. The animal being brought into a state of 'nitrogenous equilibrium,' a saturated solution of sulphuretted hydrogen was introduced into the stomach through a gastric tube, about four or five hours after feeding. These experiments showed that the tissue-metamorphosis was invariably more or less considerably increased, the increase being observed not only in the daily amount of urea, but also in that of phosphoric and sulphuric acids in urine. [In the *Zapiski Piatigorskaho Russkaho Balneolog. Obscht.*, 1867, No. 2, p. 92, Dr. Ivanoff also reported that he found an increased daily amount of urine, urea, and sulphates in three of his patients treated by Piatigorsk sulphurous waters.] In the experiments with therapeutic doses, the assimilation of nitrogenous food rose from 9·5 to 23·6 per cent. The remaining three series of experiments were carried in animals with gastric, pancreatic, or hepatic fistula. They showed that the ingestion of sulphuretted hydrogen water neither increased the amount of the gastric or of the pancreatic juice, nor interfered with their digestive power, but it did increase the secretion of bile and the amount of its solid constituents.

To conclude, we may point out that Dr. G. A. Smirnoff was the first to reproduce Cheyne-Stokes' phenomenon, with all its classical features, in an experimental way. At the same time, he attempts to explain it by a theory of his own, for he is not satisfied either with Traube's or with Filehne's hypothesis. Considering the data embodied in the statements 1 to 8, he asserts that 'the single source for Cheyne-Stokes' respiration is given in a certain weakened state of the respiratory centre, without any intermediation of the vaso-motor system, or the vagi and other centripetal nerves. Sulphuretted hydrogen, by its specific action, lowers sensibility of the respiratory centre in regard to ordinary stimuli; consequently, the latter, in order to excite the centre, must reach a greater tension than under normal conditions. On the other hand, we know that the nerve-centres possess a power of summing up weak but incessant impressions received by them, and of periodically answering to these impressions by a whole complex of reflex phenomena, the strength of which may be far greater than that of an initial stimulation.' As to the etiological moments of Cheyne-Stokes' respiration in cases of cardiac or vascular disease, the author finds them in an anæmic state of the nervous centres. V. IDELSON, M.D.

ARTICLE 4808.

POKROVSKY ON SPONGE-GRAFTING AND SPONGE-DRESSING.[*]

AT a meeting of the Arkhangel Medical Society, Dr. P. A. Pokrovsky made an interesting communication on his experience in the use of sponge as a grafting and dressing material. Having reviewed the literature of the subject [Hamilton, in the LONDON MEDICAL RECORD, p. 450, 1881; Whitman, *ib.* p. 507, 1882; Sanctuary, *ib.* p. 133, 1883; Perkins Case, *ib.* p. 183; Akimoff, p. 283, 1884; Fergusson, Acland, and Burnett], the author proceeds to describe his method of treating wounds and ulcers by means of sponge. He takes a best officinal Turkish sponge (to be found at any chemist's shop), cuts it into fine slices (about two lines in thickness), washes the latter in a 3 per cent. solution of carbolic acid, and, after carefully squeezing them out, covers with them the whole surface of the wound or ulcer; over the slices oil-cloth or wax-paper is applied, the whole being fixed, under but slight pressure, by a roller bandage or a handkerchief. When purulent discharge is excessively free, a layer of cotton-wool or a woollen cloth is placed over the oil-cloth. In other words, the author uses sponge instead of gauze, as a constituent of a warming compress. The slices of sponge (as well as the whole dressing) are changed one, two, or three times daily, according to the profuseness of the suppuration. The sponge-dressing, applied in this manner, was employed by the author in four cases of extensive syphilitic ulcers of the thigh, leg, scrotum, and elbow; in eight cases of soft chancrous ulcers of the glans and collum penis, prepuce, scrotum, &c.; in one case of chancrous bubo; and in twelve cases of non-syphilitic ulcers of the leg, forearm, shoulder, &c. In several of the cases sponge-grafting, after Professor Hamilton's plan, was tried. The results of the author's observations may be summed up thus.

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[*] POKROVSKY, A. K.—On the Healing of Ulcers and Wounds through Sponge (*Proceedings of the Arkhangelsk Medical Society*, 1885, Series II., pp. 42-44).—*In extenso*, in the *Russkaia Meditzina*, 1885, No. 15, pp. 294-7; No. 16, pp. 315-17, and No. 17, pp. 330-31.

1. Sponge used as a dressing material acts on the ulcerative process purely mechanically. Being porous and endowed with extreme capillarity, it frees the ulcer or wound from purulent discharge; at the same time, it acts as an irritant on the surface of the ulcer. Hence it favours an afflux of nutritive material to the ulcer, which presents a necessary condition for the healing process.

2. Sponge is an excellent dressing material in all cases of old obstinate ulcers with free purulent discharge. Under the sponge-dressing, ulcers pretty rapidly cleanse themselves and undergo cicatrisation. [Thus, in seven cases of crural ulcers cure ensued, on an average, in twenty-six days.]

3. The sponge-dressing brings about rapid cleansing and healing of soft chancres and chancrous buboes (cure following in about ten days).

4. In syphilitic cases, the sponge-dressing gives rise to rapid cicatrisation only after the syphilitic virus has been mitigated by specific treatment; otherwise the application of sponge causes disintegration of tissues.

5. Sponge-grafting causes suppuration and retards the healing process. [The author's attempts at sponge-grafting had been so unsuccessful, that he altogether dismissed Hamilton's method from the treatment of ulcers in his practice. According to his observations, sponge-grafts do not undergo absorption, but are disintegrated and fall away in pieces during irrigation, or in consequence of their being undermined by pus.] The ulcer does not heal until the last sponge-particle is removed.

In conclusion, Dr. Pokrovsky points to the extreme cheapness of sponge-dressing. All the cases of ulcers which were admitted to the local hospital in 1884 were dressed with sponge; the expense of the latter did not exceed four roubles (about eight shillings). V. Idelson, M.D.

Article 4809.

SIGRIST ON BRONCHIAL HÆMORRHAGE AS A CAUSE OF PULMONARY DISEASE.*

The question whether intrabronchial hæmorrhage may be a starting-point for the development of phthisis (phthisis *ex hæmoptoe*), or whether hæmoptysis occurs always (excepting in cases of congestion and the like) only as a symptom of pre-existing consumption, has greatly attracted the attention of medical men from the times of Hippocrates. As is well known, the latter was of opinion that extravasation of blood into the alveoli gives rise to suppurative inflammation with ulceration of the pulmonary tissue. In 1867, Felix Niemeyer first returned to the views of Hippocrates, and admitted that phthisis may originate from the entrance of blood into the respiratory tracts. Meanwhile, Traube most decidedly repudiated this assertion. A lively controversy on the point ensued among clinicists. Oppolzer, Weber, Kuntze, and Jaccoud took side with Niemeyer; Skoda, Peter, Ruehle, Hertz, and Eichhorst with Traube. The conflict between physicians gave rise to a series of experimental researches by Waldenburg, Perl and Lippmann, Peter, Summerbrodt, Nikander Sokoloff (*Moscow Inaug. Diss.*, 1872), Alexander Partzevsky (*Moscow Inaug. Diss.*, 1877), and Nothnagel. While Perl and Lippmann, Peter and Nothnagel obtained negative results, the remaining four observers named found that intratracheal injection of blood led to acute catarrhal pneumonia (usually of the middle and lower lobes), and that the disease soon issued in resolution, the animal's lungs returning to a healthy state about the third week after the injection.

In view of this unsettled condition of the question, as well as in view of the enormous practical importance of the matter, Dr. Victor F. Sigrist, house-physician in Professor V. A. Manasseïn's clinic, undertook (*St. Petersb. Inaug. Diss.*, 1884, p. 62) an experimental inquiry in the same direction, but with an important addition; while all his predecessors experimented only on healthy and well-nourished animals, he established his researches on a broader basis, by including experiments on animals exhausted by preceding starvation or by a prolonged febrile state. The author's experiments were conducted on seven groups of dogs, each of the groups consisting of three animals—one healthy, one exhausted by starvation of eight or ten days' duration (with a loss of 15 per cent. of the original weight), and one exhausted by traumatic fever of eight or ten days' standing (the disease was induced by means of a steel or copper screw being introduced into the femur down to the marrow). Each of three animals of every group received simultaneously 50 cubic centimètres of either defibrinated and filtered (in two groups), or of whole blood (in five groups), which was injected by means of a glass syringe into the trachea. The animals were killed (by puncture of the medulla oblongata) five or ten days after the injection of defibrinated blood, and five days, two, three, six weeks, and three months after the injection of intact blood.

The results of the macroscopic and microscopic examination of the lungs are these. 1. Intratracheal injection of defibrinated blood does not give rise to any inflammatory phenomena in the lungs, either in healthy or in exhausted animals. 2. Intratracheal injection of intact blood produces catarrhal pneumonia both in healthy and in exhausted dogs. 3. However, in healthy animals the inflammatory phenomena are but very slight, the morbid process disappearing, and the lungs returning to their normal state, in about three weeks. 4. In starved animals, the inflammatory phenomena are considerably greater; though the morbid process comes to a favourable issue in a time between six weeks and three months, still it leaves a considerable increase of connective tissue in the parts affected. 5. In febrile dogs, catarrhal pneumonia is soon obscured by inflammation of the pulmonary parenchyma. The inflammatory process gradually progresses, and leads to profound alteration in the pulmonary tissues. Beside catarrhal changes and new formation of connective tissue, there is observed fatty degeneration of the cells of the bronchial cartilages. 6. The striking difference between the results of injection of defibrinated blood and those of whole blood, undoubtedly points to the fact that inflammatory changes are developed under the influence of fibrine, which acts as an irritant on the pulmonary tissues. As a matter of fact, the strength of inflammation stands in direct connection with the duration of existence of coagula. Inflammation is absent when defibrinated blood is injected. On injecting whole blood, the coagula disappear sooner in healthy and starved animals than in febrile (in the latter distinct coagula being still found on the fifth day); correspondingly, the inflammation is far less marked in the former cases than in the latter. While the microscopic appearance and the course of the disease in healthy and starved dogs correspond with ordinary catarrhal pneumonia, febrile animals show chronic pneumonia, which is most closely allied with Buhl's 'desquamative pneumonia.'

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* Sigrist, Victor F.—A Contribution to the Question of Bronchial Hæmorrhage as an Etiological Moment in Pulmonary Diseases (*St. Petersb. Inaug. Diss.*, 1884, p. 62, with two drawings).—A Preliminary Note on ditto (*Vratch*, 1884, No. 18, pp. 298-300).

Taking into consideration (*a*) the slight disposition of dogs to pulmonary disease; (*b*) the well-known difficulty met on inoculating tuberculosis into the animals; and (*c*) the close anatomical similarity between the human and the canine lungs; Dr. Sigrist comes to the conclusion that he is justified in applying the results of his investigations to human beings. Accordingly, he states that blood-coagula may be a starting point for pulmonary inflammation, also, in man; and that, when catarrhal pneumonia is induced by bronchial hæmorrhage in a considerably exhausted patient, it may, probably, end in caseous pneumonia. As to healthy subjects, pneumonia (originating in them *ex hæmoptoe*) usually would end in resolution. In conclusion, the author mentions an interesting fact obtained by him on repetition of Nothnagel's experiment of division of the trachea and both common carotids, the latter being divided in such a manner that blood might freely flow into the lungs. While Nothnagel observed an enormous infiltration of the pulmonary parenchyma with red blood-corpuscles, Dr. Sigrist saw, also, as enormous an infiltration with white corpuscles, which were accumulated mainly around, and in, the small vessels and bronchioles. The infiltration could not possibly be of an inflammatory nature, since the animals experimented upon died in two or three minutes after the division of the carotids. As a series of special experiments showed, the phenomenon was to be ascribed partly to leucocytes of the extravasated blood, but mainly to leucocytes emigrating from the pulmonary blood-vessels.

V. IDELSON, M.D.

HEALTH-RESORTS NEAR LONDON.—In the *Brit. Med. Jour.*, Aug. 1885, p. 233, Mr. A. D. Graham writes that he has received twelve answers to a letter inquiring as to localities near London that might bear some resemblance to Bournemouth in respect to soil and vegetation. Eight of these communications relate to a district which may best be described as having the shape of an open fan, the handle being at Weybridge. From Weybridge to Wokingham on the north, and to Godalming on the south, would represent the two sides of the fan; and a line from Godalming to Wokingham, with a curve sufficient to include Farnham and Eversley, would complete the boundary. Other places mentioned are Bagshot, Woburn, Ampthill, Ightham, near Sevenoaks, and Ascot.

SURGERY.

RECENT PAPERS.

4810. LEDIARD.—Elevation of the Arms as an Indication of Peritonitis. (*Lancet*, September, p. 522.)

4811. GIBSON.—Dislocation of the Atlas with Fracture of the Odontoid Process. (*Lancet*, September, p. 429.)

4812. PORCHER.—Cucaine in Avulsion of In-growing Nail. (*Philadelphia Med. News*, July.)

4813. LEE.—A Case of Abscess of the Head of the Tibia. (*Lancet*, September, p. 517.)

4814. HAGUE.—A Case of Prolonged Retention of Urine treated by Aspiration daily for Five Weeks. (*Lancet*, August, p. 385.)

4815. Electricity in Surgery. (*Brit. Med. Jour.*, September, p. 561.)

4816. FENWICK.—Laparotomy as an Aid to Herniotomy. (*Lancet*, September, p. 566.)

4817. RICHARDSON.—Surgical Meteorology. (*Asclepiad*, 1885, p. 354.)

4818. THISTLE.—Suprapubic Aspiration of the Bladder. (*Lancet*, Oct., p. 715.)

4819. ROBSON.—The Eucalyptus-Air and Dry Dressing. (*Brit. Med. Jour.*, Oct., p. 725.)

4820. LÜCKE.—On Sugar-Dressings. (*Deutsche Zeitschr. für Chirurg.*, Band xxii.)

4821. BINKERD.—Complete Compound Dislocation of the Tibia with Fracture of the Fibula—Recovery with nearly perfect use of the Joint. (*New York Med. Jour.*, May 9.)

4822. WOODWARD.—An Excised Hip-joint Twenty-two Years after Operation. (*Boston Med. and Surg. Jour.*, April 23.)

4823. BŒCKEL.—Cholecystotomy. (*Revue de Chir.*, October.)

ART. 4810. *Lediard on Elevation of the Arms as an Indication of Peritonitis.*—In the *Lancet*, Sept. 1885, p. 522, Mr. Lediard contributes the following note. A waiter, aged 22, was brought into the Cumberland Infirmary. He had been stabbed in the abdomen, and a foot of small intestine was protruding. On the following day he was observed to keep his hands above his head, in a position often assumed when one is lying on the grass in summer. Within twenty-four hours he was seen to raise the left thigh; later on the knees were constantly drawn up, and the hands were kept behind the head. Death occurred on the fourth day from general peritonitis. The author states that in peritonitis following operations for hernia, ovariotomy, &c., he has constantly observed patients lying with their arms raised; and he considers this position to be coincident with the commencement of peritonitis. When the inflammation is at its height, the hands will be clasped behind the occiput. The object is to lift all pressure from the distended bowel by fixing the diaphragm, thus making all the breathing thoracic.

4811. *Gibson on a Case of Dislocation of the Atlas with Fracture of the Odontoid Process.*—In the *Lancet*, Sept. 1885, p. 429, Dr. W. W. Gibson records the case of a man, aged 58, who fell down a steep hill in Wales, rolling a distance of about one hundred yards. He lay unconscious for many hours, and was then assisted home, where he was seen by Dr. Gibson, who discovered that the man had dislocated the atlas. He was placed across the bed, with his head and shoulders pointing outwards. The author then placed his hand lengthways along each side of the head, and made slight steady traction in the direction of the spinal axis. To his surprise, the dislocation was reduced with a snap, accompanied by crepitus, showing there was a fracture as well. The patient was quite relieved from all pain, and wished to go about. He was, however, placed in a comfortable bed, and the head and neck were fixed by pillows and sandbags. The patient went on well until the twenty-third day, when his wife gave him some solid food, which caused such griping pains that he started up in bed and almost immediately expired. On *post mortem* examination, it was found that the odontoid process was broken off with a part of the body of the axis, and that there was nearly complete dislocation of the axis from the atlas.

4812. *Porcher on Cucaine in Avulsion of Ingrowing Nail.*—In the *Philadelphia Med. News*, July 1885, Dr. Porcher relates the case of a lady who had her toe-nail removed after applying cucaine locally. A 4 per cent. solution of the hydrochlorate was dropped upon the raw surfaces in the furrows on each side of the nail. A rag soaked in the solution was pressed against the upper surface of the toe, and three injections were made into the flesh at the base of the nail, just above the matrix. After an interval of fifteen minutes the toe-nail was removed in the usual way, without causing the slightest pain.

4813. *Lee on a Case of Abscess in the Head of the Tibia.*—In the *Lancet*, Sept. 1885, p. 517, Mr. Henry Lee records a peculiar case. In Oct. 1884 a clergyman consulted him on account of severe pain in the right tibia. The patient's previous history was very extraordinary. In 1864, when 12 years old, he was seized with great pain below the knees in both legs, and had a severe illness of several months' duration. During this time, abscesses formed in more than a dozen places on the lower extremities, as well as on the outer side of the right hip, on the lower end of the spine, on the left elbow, back of the head, and other places. Several large pieces of dead bone came away from various parts, and three years elapsed before the sores had all healed. In 1871, the patient was seized with severe pain in the head of the right tibia, which continued for several months, when the leg became swollen, and an abscess formed amongst the muscles of the calf. Similar attacks occurred in 1873, 1875, 1876, 1878, 1881, 1883, and 1884. In Oct. 1884, Mr. Lee induced the patient to have the tibia trephined. An incision was made over the internal tuberosity down to the bone; the trephine was applied, and penetrated to a great depth, reaching a soft structure, and was then removed. A larger trephine was then applied to the bone exposed at the lower end of the incision, but was not worked more than half an inch deep. The piece of bone was left to exfoliate, which it did a fortnight after the operation, making a communication between the two openings. On Christmas Day 1884, a small rounded piece of bone, twice as large as a pin's head, came away. By the end of March the wounds healed, and in the following June the patient was appointed a naval chaplain. The author remarks that the persistent recurrence of abscess in the head of the tibia in this case, with intervals of good health, pointed to some local irritation in the part. Probably the small piece of bone was the cause of this local irritation, and it is questionable whether it became a foreign body in 1864 or in 1871.

4814. *Hague on a Case of Prolonged Retention of Urine treated by Aspiration daily for Five Weeks.*—In the *Lancet*, Aug. 1885, p. 385, Mr. Hague reports the case of a man, aged 90, who suffered from retention of urine for forty-eight hours. No catheter could be introduced on account of the enlargement of the prostate, and numerous false passages. It became absolutely necessary to relieve the patient somehow, and Mr. Hague decided to aspirate. By this means, thirty-five ounces of urine were drawn off. The next morning the aspirator was used again, and continued to be used daily for nearly five weeks, as no catheter was able to be introduced, though several surgeons endeavoured to do so. At last, the author succeeded in passing a soft catheter. The patient suffered no ill effects whatever from the numerous aspirations.

4815. *Electricity in Surgery.*—In the *Brit. Med. Jour.*, September 1885, p. 561, attention is drawn to the new electrical department recently added to St. Bartholomew's Hospital. Mr. Bruce Clarke and Dr. Steavenson have been trying the efficacy of the treatment of stricture of the urethra by electrolysis, with very satisfactory results. Several cases have, to all appearances, been cured with the smallest amount of pain, and without the use of an anæsthetic. The amount of contraction that takes place afterwards is said to be but slight. An attempt has also been made to dissolve the middle lobe of the prostate in a case of prostatic enlargement; and, if this method of treatment succeed, we may look to electrolysis as likely to prove the most adaptable and promising mode of treatment for stenosis of the os uteri in cases of dysmenorrhœa and sterility, and also in all other abnormal contractions of natural passages.

4816. *Fenwick on Laparotomy as an Aid to Herniotomy.*—In the *Lancet*, September 1885, p. 566, Mr. H. Fenwick records a case showing the value of laparotomy as an aid to herniotomy. The operation owes its origin to a suggestion of Mr. Annandale, who pointed out how much easier it is to draw a loop of bowel up than to press it back piece by piece into the peritoneal cavity. A man, aged 53, was admitted into the London Hospital with a strangulated left inguinal hernia. All attempts at reduction failed, and an operation was decided upon. The sac was opened and the neck incised, but every time a piece of the gut was pushed back into the peritoneal cavity it shot out again. The author then decided to open the abdominal cavity, and made a two-inch incision just over the pubes. The left forefinger was introduced into the abdomen and hooked under the gut, and the entire gut was easily withdrawn into the abdomen. The patient, however, died six days after the operation, from exhaustion. The author advocates this method of treatment in cases of strangulated hernia, and believes that the small abdominal wound will not add to the risks of herniotomy. [In the *Lancet*, May 1882, Dr. Chavasse reports a case of strangulated umbilical hernia operated upon by laparotomy after the mode described by Mr. Annandale in the *Edin. Med. Jour.*, September 1873. Mr. Crompton attempted the same operation in 1860.—*Rep.*]

4817. *Richardson on Surgical Meteorology.*—In the *Asclepiad*, 1885, p. 354, Dr. B. W. Richardson gives the following rules in operations. *The time is favourable for operation*—*a*, when the barometer is steadily rising; *b*, when the barometer is high; *c*, when the wet-bulb thermometer shows a reading of five degrees below the dry-bulb; *d*, when, with a high barometer and a difference of five degrees in the two thermometers, there is a mean temperature at or above 55° F. *The time is unfavourable for operation—a*, when the barometer is steadily falling; *b*, when the barometer is low; *c*, when the wet-bulb thermometer approaches the dry-bulb within two or three degrees; *d*, when, with a low barometrical pressure and approach to unity of reading of the two thermometers, there is a mean temperature above 45° and under 55° F.

4818. *Thistle on Suprapubic Aspiration of the Bladder.*—In the *Lancet*, Oct. 1885, p. 715, Mr. Thistle reports six cases in which this plan of treatment was carried out, and fully confirms the value of such a mode. In the six cases the aspirator was employed ten times. On removal of the trocar a long elastic tube was attached to the cannula, conveying the urine into a vessel below. On removal of the cannula, a pad of lint was strapped over the puncture for twenty-four hours.

4819. *Robson on the Eucalyptus-air and Dry Dressings.*—Mr. Mayo Robson, in the *Brit. Med. Jour.*, Oct. 1885, p. 725, reports eighteen cases in which he has employed the dry air eucalyptus spray instead of the carbolic acid spray. A previous paper, describing the value and mode of using the eucalyptus appeared in the *Journal*, March 1882, p. 421. The dressings used are a single layer of gauze, wet with carbolic acid, 1 in 40, or of perchloride of mercury, 1 in 2,000, applied next the wound, and over this a thick layer of salicylic silk or wool, the whole being retained in position by a gauze bandage. If there be no drainage-tube, this is the first and final dressing; but if there be tubes, these are removed on the third day, and another dressing applied.

RICHARD NEALE, M.D.

4820. *Lücke on Sugar-dressings.*—Dr. Lücke, of Strasburg (*Deutsche Zeitschr. für Chirurg.*, Band. xxii., Fasc. 3 and 4, 1885), publishes the results of a sugar-dressing which he has recently adopted. The instruments are immersed in a 5 per cent. solution of carbolic acid. Half an hour before the operation is performed, the hands of the operator and his assistant are disinfected; in serious operations, laparatomy, &c., the spray is used; the wound is sponged out with disinfected sponges, sometimes washed out with an irrigator. A sugar-dressing, prepared as follows, is placed on the wound. A piece of cardboard is covered with a sheet of gutta-percha; upon this is placed a piece of muslin free from fatty matter. A layer of powdered sugar is then prepared; it should be half a centimètre thick, and sufficiently large to extend ten centimètres beyond the wound; the muslin is folded over the sugar; a thick layer of muslin, free from fatty matter, is placed next to the wound; the sugar-dressing is superposed, and over that again a sheet of gutta-percha; the edges of the dressing are guarded by cotton-wool. The dressing remains untouched for six or eight days, unless fever set in, which is quite an exceptional occurrence. When the drainage-tubes are shortened and the sutures removed, a fresh sugar-dressing is applied. When there is a raw surface, the sugar-dressing is applied directly to the wound. Dr. Lücke adopted this dressing with two hundred and two patients. Five of them died; a female patient from erysipelas, who had been operated on for cancer of the breast; another from hæmorrhagic nephritis; two others from pulmonary phthisis; the fifth died during the operation.

W. VIGNAL.

4821. *Binkerd on Compound Dislocation of the Ankle: Recovery.*—The following case is recorded by Dr. Binkerd, of Cincinnati, in the *New York Med. Jour.* for May 9. A man, aged 45, of vigorous health and temperate habits, in jumping from a swiftly going waggon, was caught by the foot between two sticks of timber and fell outward. This resulted in a transverse fissure of the skin and soft parts across the internal malleolus: the deltoid ligament was torn from its attachments to the tarsal bones, bringing with it fragments from the scaphoid, astragalus, and calceneum. The fibula was fractured about two and a half inches above its lower extremity, and the foot was everted to a right angle with the axis of the leg, with the internal malleolus protruding through the fissure in the integument, and the synovial sac exposed. Within forty minutes after the accident the patient was seen by Dr. Binkerd. In order to effect a reduction, it was necessary to incise the lower border of the wound. The hand being thoroughly cleansed in warm carbolised water, the interior of the joint was explored, and found to be free from any foreign body. The osseous fragments were snipped off from the deltoid ligament, and the parts were restored as nearly as possible to their normal position. The edges of the T-shaped wound were approximated by several sutures, and a loose starched bandage applied, room being left for swelling. No anæsthetic was used. Ample drainage of the wound was provided for, and the parts were kept constantly moistened with lotion of lead and opium. The condition of the kidneys and bowels was closely watched, and the patient had ten grains of quinine once a day, and tincture of chloride of iron in full dose after meals. He was also allowed a good quantity and great variety of nutritious food. The temperature scarcely rose above the normal during the entire treatment. No inflammatory action took place, and the patient returned to his home in the country at the end of eighteen days. From a letter recently received from the patient, more than seven years after the accident, Dr. Binkerd learns that walking with the aid of a staff was begun about four months after the receipt of the injury. From this time, strength and motion in the joint increased steadily, until now, the patient writes, 'while the wounded foot is not as strong as the other, the motion is more than half as great, I may say two-thirds as great, as that of the other foot.'

4822. *Woodward on a Hip-joint Twenty-two Years after Excision.*—Dr. L. F. Woodward describes in the *Boston Med. and Surg. Jour.* of April 23, the condition of a woman aged 29, on whom he had made a careful examination of the hip-joint, which had been excised for hip-disease twenty-two years before. The disease began at the age of five years, and an abscess formed two years later. Dr. Credarwitz, of Brooklyn, excised the head of the femur, the patient then being between 7 and 8 years old. The sinuses continued to discharge for about three years. Since then, she had had no trouble with the hip. There was a well-formed head to the femur, beneath the scar of the operation, which rotated under the hand. The whole limb was shortened 3 inches; 2½ inches in the thigh and ½ an inch in the leg. There was a difference of 3 inches in the circumference of the thighs, of one inch in the calves, and the foot on the affected side was half an inch shorter than its fellow. All joint-motions were possible. Flexion was nearly equal on the two sides. Extreme extension was impossible, but the popliteal space could be brought down to the bed without tilting the pelvis. External rotation was limited to about two-thirds, and internal rotation to about one-third, of the normal amount. Abduction was about one-half the normal, while adduction was the least perfect of the motions, there being not more than a fourth as much on the affected side as on the other. The patient had been free from pain since the sinuses healed, and with a high shoe could walk with comfort. She had supported herself by sewing, and worked her sewing-machine with either foot. There was nothing abnormal in the pelvis. Dr. Woodward says that the limb in this case was much more useful than the ordinary joint of spontaneous recovery.

4823. *Bœckel on Cholecystotomy.*—The *Revue de Chirurgie* for October contains a full report of a communication on cholecystotomy made by M. Bœckel, of Strassbourg, at the Congress of French surgeons held in April last. The author reports here three cases of cholecystotomy, and argues that the operation is indicated almost exclusively in cases of biliary fistula, and that in the absence of such condition it ought not to be performed except in very exceptional cases, and after very careful consideration. In the latter class of cases, M. Bœckel holds there must often be a difficulty in diagnosis, and some uncertainty as to the results of operation. Notwithstanding the numerous contributions to the surgery of the gall-bladder that have been made since 1879, when Mr. Lawson Tait brought again under the notice of the profession the old and neglected operation of cholecystotomy, there is still much uncertainty as to the relative advantages of Petit's operation and the more radical proceeding of Langenbuch. A brief review of the more important papers on this subject will be found in the LONDON MEDICAL RECORD for February of this year.

Among the more recent contributions on this subject is one by M. Thiriar, of Brussels, who prefers cholecystectomy, but who, in his advocacy of this proceeding, seems to be under the impression, cerainly not well based on clinical experience, that cholecystotomy, as practised by Mr. Lawson Tait, is attended by the inconvenience of a more or less persistent biliary fistula.

MEDICINE.

RECENT PAPERS.

4824. FOTHERGILL.—Feeding Patients in Exhaustion. (*Brit. Med. Jour.*, Sept., p. 348.)

4825. SAUNDBY.—A Special Form of Numbness of the Extremities. (*Lancet*, Sept., p. 422.)

4826. Artificial Respiration in Sunstroke. (*Brit. Med. Jour.*, August, p. 425.)

4827. PAVY.—Cyclic Albuminuria (Albuminuria in the Apparently Healthy). (*Brit. Med. Jour.*, October, p. 789.)

4828. GÖTZE.—Short Pulse with Mediastinal Tumour. (*Berliner Klin. Wochensch.*, 1885, No. 6.)

4829. FREIRE.—Prophylactic Inoculations in Yellow Fever. (*Gazz. Med. Ital. Lombard.*, Sept. 26, 1885.)

4830. EBSTEIN.—Clinical and Critical Observations on Perforative Peritonitis. (*Zeitschr. für Klin. Med.*, Band ix.)

ART. 4824. *Fothergill on Feeding Patients in Exhaustion.*—In the *Brit. Med. Jour.*, Sept. 1885, p. 438, Dr. Milner Fothergill contributes a paper on the subject of feeding patients who are dying from exhaustion. The fuel of the body is glycogen and fat. How fat is burned in the body, we do not know; but glycogen is supposed to be burnt as lactic acid in union with soda—viz., as lactate of soda. From the carbohydrates of our food, glycogen, or animal starch, is stored, mainly in the liver. This glycogen is stored up from each meal, and is given off as grape-sugar as the body requires it. The liver gives off grape-sugar so long as it has any to give; when the body-fat is all gone, the store of glycogen is exhausted, and death must follow. Putting this into practice, the author shows how useless it is to give an invalid quantities of beef-tea, &c.; if, however, one add grape-sugar to the beef-tea, then the patient has a chance of deriving benefit from it. In all prepared 'foods' we now find starch, which has been converted into soluble dextrine or maltose. There are also made several malt-extracts, containing not only soluble carbohydrates, but also some soluble albuminoids and phosphatic salts, ground malt of like composition, also grape-sugar itself.

4825. *Saundby on a Special Form of Numbness of the Extremities.*—In the *Lancet*, Sept. 1885, p. 422, Dr. R. Saundby directs attention to a very common, but little studied, neurosis—viz., a peculiar numbness and tingling, very similar to that produced by pressure on a nerve, occurring sometimes in one, sometimes in both, upper extremities; at other times it is present in both upper and lower extremities, or in the upper and lower extremity of one side of the body. This sensation of numbness is more or less painful; it is accompanied by transient loss of power; it is relieved by rubbing; it occurs distinctly in paroxysms, and more often at night. In its minor forms it is more common in women, but the most severe forms are generally met with in men. Most patients are past middle life when they first notice an attack, and the author has never met with it in anyone under twenty-five years of age. It is supposed to be distinctly connected with disordered digestion, and readily yields to treatment. Five cases are noted in which patients suffered from this symptom, and they were all relieved by attending to the organs of digestion. In many of these cases a grain of calomel, given on alternate nights, proves most beneficial. Rhubarb has been found also most beneficial. Several other papers upon this subject are to be found in subsequent pages.

4826. *Artificial Respiration in Sunstroke.*—In the *Brit. Med. Jour.*, Aug. 1885, p. 425, a correspondent writes that he lately treated a case of sunstroke at Suakin by employing Silvester's method of artificial respiration. The patient regained consciousness in about ten minutes, and recovered.

4827. *Pavy on Cyclic Albuminuria* (*Albuminuria in the Apparently Healthy*).—In a paper read at the last meeting of the British Medical Association (*Brit. Med. Jour.*, Oct. 1885, p. 789), Dr. Pavy gives details of a few cases of that form of albuminuria described by various authors as 'albuminuria in the apparently healthy,' 'physiological albuminuria,' 'intermittent albuminuria,' and 'albuminuria in adolescents' (vide *Medical Digest*, sect. 1008 : 2). The necessity of accurately estimating the nature of this affection is clear, as the gravity of such cases is diametrically opposite to that of ordinary Bright's disease. One tolerably constant and diagnostic distinction is the fact, that at one period of the day large quantities of albumen may exist in the urine, at others little or none; and this observation of one day is repeated on subsequent days more or less closely, so that Dr. Pavy has given the name of cyclic albuminuria to such cases. The period during which the albumen is usually noticed is at 9 to 11 A.M. or later, until it reaches its maximum, and by the evening has usually disappeared. Analogous cyclical phenomena are noticed in phosphatic urines, that passed early in the morning being clear; later on, it is alkaloid, turbid, and phosphatic. In some interesting remarks at p. 723, the editor of the *Lancet*, commenting upon Dr. Pavy's observations, writes:—'We think it can be shown that "cyclical albuminuria" does not depend upon any special periodicity, but upon general habit and circumstances. As Dr. Pavy observes, the urine passed on rising is usually free from albumen; it is the urine next passed that is albuminous. Now the early morning urine represents the secretion under the influence of rest, and the mere act of rising in persons who are in the habit of passing albumen under slight provocation seems in many instances sufficient to cause it. Thus, in the case of a young lady who was suffering from what was supposed to be "adolescent albuminuria," the urine passed shortly after rising was always highly albuminous; if she rose before breakfast, the albumen showed itself in the forenoon; if she rose after lunch, in the afternoon; if she rose after dinner, in the evening. Here, then, the albuminuria was made periodic by the habit of the day. In other cases, the albuminuria seems sometimes due to cold; either to exposure while dressing, or to a cold bath, or even to washing the face and hands in cold water. The fact that neurotic albuminuria is observed clinically in some after a cold bath or exposure to cold, has led to the suggestion that such cases are allied to paroxysmal hæmoglobinuria. Dr. Pavy's cases are interesting, but scarcely warrant the explanation that physiological cyclic changes account for the albuminuric phenomena.' RICHARD NEALE, M.D.

4828. *Götze on Short Pulse with Mediastinal Tumour.*—Dr. Götze, in the *Berl. Klin. Wochensch.*, describes two cases in which a remarkably short pulse (pulsus celer) occurred in connection with a mediastinal growth verified *post mortem*. The pulse, which resembled that of aortic insufficiency, is thus explained. Owing to the enclosure of the heart in a space with unyielding walls by the abnormal growth, a strong negative pressure occurred immediately after each systole. The blood was accordingly powerfully aspirated into the right ventricle, thus permitting an easier emptying of the peripheral arteries. But besides this, the recoil wave against the semilunar valves was intensified by the rapid ventricular dilatation directly systole was over, and hence the positive arterial wave was lessened. Hence the sudden descent in the pulse curve. The above view is supported by the fact, that the recoil elevation is situated pretty high on the descending limb of the curve.

E. J. EDWARDES, M.D.

4829. *Freire on Prophylactic Inoculations in Yellow Fever.*—Dr. Domingos Freire has inoculated more than 300 persons with the cultivation-liquid of the microbe of yellow fever. Five or six punctures are made on one arm; within a few hours the patient experiences headache and pains in the limbs, a slight rise of temperature (from 0°·8 to 1°·5 C.), and rarely nausea and vomiting. These symptoms last sometimes two or three days, but never are serious. The inoculations were performed on persons living in infected localities; none of the inoculated died, a few only had the disease in a mild form. Among persons not inoculated and living with the inoculated, there were 200 deaths from yellow fever in the period of three months. G. D'ARCY ADAMS, M.D.

4830. *Ebstein on Perforative Peritonitis.*—Dr. W. Ebstein thus sums up (*Zeitschr. für Klin. Med.*, Band ix.) the results of his observations on peritonitis from perforation. 1. As in acute diffuse peritonitis, so also in peritonitis following perforation of the stomach or intestine from ulceration or other cause, there may be contraction of the abdominal muscles; this may be very intense, and its duration may vary. Death may occur while it is present. As a rule, the contraction—during which, especially at first, the pulse is not usually quickened—gives way to more or less swelling of the abdomen, with or without tension of the abdominal muscles. 2. When contraction of the abdominal muscles is present, perforative peritonitis may be suspected, *a*, if symptoms of acute diffuse peritonitis be present; *b*, if the liver-dulness, which was known to be present before the symptoms set in, disappear partly or completely, and if there be a doughy condition of the epigastrium, with a distinctly tympanitic, generally high, percussion-sound. 3. These last-named symptoms, however, lose much of their value when the abdomen is much distended, as great distension of the bowels may produce perfectly analogous signs. The statement of the patient 'that he has felt as if something were torn in his belly' has a certain diagnostic value. Dr. Ebstein disapproves of moving or shaking the patient for the purpose of diagnosis, as being dangerous, and of doubtful value. 4. Persistence of liver-dulness in perforation of the stomach or bowel into the peritoneal cavity indicates, provided the liver be not fixed in its position, that the peritoneal cavity contains fluid and not air, or that perforation has taken place a short time before, or after, death. 5. In some cases of peritonitis from perforation of the stomach, only the contents of the stomach escape into the peritoneum, but no air. The escape of fluid ingesta is followed by very acute peritonitis; if this do not occur, the perforation has taken place after, or a very short time before, death. 6. The absence of vomiting when peritonitis is present, and its arrest when diffuse acute peritonitis has set in and the patient remains conscious, indicates either that the peritonitis has been caused by perforation of the stomach, or that perforation has supervened on diffuse peritonitis. Vomiting is absent where perforation takes place into the general peritoneal cavity; and the same may be the case when the opening leads into the omental sac. Vomiting may occur in peritonitis from perforation of the stomach, or may recur after cessation, if the opening become closed by adhesions to the neighbouring parts. A. HENRY, M.D.

M. BOCHEFONTAINE writes to the Académie des Sciences that he is willing to accede to M. Trécul's desire that he should repeat his operation of swallowing cholera-dejecta before the members of the Academy, and also to undergo an hypodermic injection of cholera-bacilli. The president observed that the Academy cannot take the responsibility of such experiments, but everyone can make what experiments he pleases at his own risk. M. Trécul insists that, as M. Bochefontaine is determined to repeat his experiments, he should do so in the presence of the academicians. The proposal is submitted to the consideration of the Section of Medicine.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

4831. NIAS.—The Use of Antimonials. (*Practitioner*, August, p. 81.)

4832. MARTIN.—Manganese as an Emmenagogue. (*Chicago Med. Jour.*)

4833. STALLARD.—On Paraldehyde. (*Pacific Med. Jour.*)

4834. WHITEHEAD.—Santonin in Amenorrhœa. (*Lancet*, September, p. 430.)

4835. LÉPINE.—The Treatment of Pneumonia by Intraparenchymatous Injections. (*L'Union Méd.*, August 1885.)

4836. PEARSON.—The Value of Liquor Sodæ Chloratæ in Enteric Fever. (*Lancet*, September, p. 220.)

4837. RICHARDSON.—Dover's Powder and its Modifications. (*Asclepiad*, 1885, p. 352.)

4838. ATKINSON.—Quinine in Pneumonia. (*Practitioner*, October 1885, p. 263.)

4839. Treatment of Freckles. (*Brit. Med. Jour.*, August 1885, p. 426.)

4840. ALLWRIGHT.—The Use of Iodine Externally in Pulmonary Cases. (*Lancet*, August, p. 419.)

4841. KIRK.—The Vesicating Properties of Methyl-Iodide. (*Lancet*, October, p. 753.)

4842. JONES.—Cannabis Indica as a Narcotic. (*Practitioner*, October, p. 251.)

4843. BLOOMFIELD.—Antipyretics; Kairin, Antipyrin, and Thallin. (*Practitioner*, October, p. 241.)

4844. CANTANI.—Hypodermoclysis for Cholera. (*Lancet*, October, p. 728.)

4845. RICHARDSON.—Peroxide of Hydrogen in Epilepsy. (*Asclepiad*, October, p. 349.)

4846. MURRELL.—The Treatment of Habitual Constipation by Friedrichshall Water. (*Brit. Med. Jour.*, Sept., p. 545.)

4847. PYE.—The Use of Natural Mineral Waters in the Disorders of Childhood. (*Med. Times and Gazette*, Sept., p. 392.)

4848. MANASSEÏN.—Cucaine in Sea-Sickness. (*Berliner Klin. Wochensch.*, No. 35, 1885.)

4849. ROBINS.—Bromide of Sodium in Sea-Sickness. (*Philadelphia Medical News.*)

4850. BIGNON.—Cuca and Cucaine. (*Les Nouveaux Remèdes.*)

4851. TESTA.—The Therapeutic Value of Iodoform in Gout. (*Gazz. Med. di Torino*; and *Deutsche Mediz Zeitung*, No. 42, 1885.)

4852. OTTO.—Hydrochlorate of Cucaine in Sea-Sickness. (*Berliner Klin. Wochensch.*, No. 43, 1885.)

4853. VEIGELIN, F.—On Aseptol. (*Farmats. Jürnal*, No. 12, 1885, p. 177.)

4854. SIMANOVSKY, N. P., PROFESSOR.—On Cucaine in Laryngeal Practice. (*Vratch*, 1885, No. 21, p. 349.)

4855. SPERLING, O.—On Paraldehyde in Nervous Diseases, and on Iodide of Potassium in Hemeralopia. (*Russkaia Meditsina*, No. 31, 1885, p. 578.)

4856. SCHOTT.—The Gymnastic Treatment of Heart-Disease. (*Berliner Klin. Wochensch.*, No. 42.)

4857. ROULLIÈRE.—The Transfusion of Serum in Cholera

4858. HOWE, L.—The Effect of Cucaine upon the Healing of Wounds. (*New York Med. Jour.*, Aug. 8.)

4859. DRAPER.—Antipyrin and its Effects. (*Boston Med. and Surg. Jour.*, April 23.)

4860. HEWSON.—Earth as an Antiseptic. (*New York Med. Record*, June 6.)

ART. 4831. *Nias on the Use of Antimonials.*—In the *Practitioner*, August 1885, p. 81, Dr. Nias contributes a most able paper on the use of antimony. The author quotes from Dr. Billing's *First Principles of Medicine*, in which he gives the following prescription as one of his favourites: acetate of morphine, ⅛ grain; tartar emetic, ⅛ grain; sulphate of magnesia, ʒj.; three times a day. A number of cases are given showing the action of antimony, especially in pleurisy; the following is one of them. A labourer, aged 37, intemperate, and looking much depressed, came to the hospital complaining of pain in the left side, cough, shortness of breath, and loss of voice. The tongue was flabby and furred; the bowels were loose; the urine was clear, dark; pulse 120, soft, regular. At the base of the left lung double crepitation and friction-sounds were heard, and diaphragmatic pleurisy was diagnosed. He was ordered a large mustard poultice to the left side, and a dose of the mixture given above three times a day. In three days the patient returned much better; the pain, friction-sounds, and crepitation had all gone; he made a good recovery. The author, in these cases, relies on only two local applications—a mustard poultice about four inches square, kept on as long as the patient can bear it, and a mild vesication to the same extent with acetum cantharidis. A case is also recorded, showing the usefulness of antimony in producing absorption of effusion in pleurisy. Reference is made to the practice of M. Jaccoud, who recommends 30 centigrammes of tartar emetic in 130 grammes of julep (a tablespoonful every hour until the whole is taken) in cases of serous inflammation complicating rheumatic fever, where effusion is apprehended. Vomiting and diarrhœa follow this treatment for a few hours; then a dose of extract of cinchona is given. If the following morning and evening temperatures be not normal, the tartar emetic is repeated on the third day, but the dose is reduced to 20 centigrammes. The best preparation of antimony is the oxide, and to this James's powder owes its efficacy; it is far superior to the pulvis antimonialis of the *British Pharmacopœia*. Antimony possesses a tonic action on the medulla similar to that of zinc, phosphorus, atropine, and picrotoxine. It is useful in cases of wakefulness due to exhaustion, either alone or as an adjunct to alcohol and opium. Antimonial powder checks the night-sweats of phthisis; this is also a property of Dover's powder and of alcohol. Conium is a most useful adjunct to antimony where cough is present, but the effects of conium are due to a volatile alkaloid, making the drug uncertain in its action, so that there is need for rendering its composition more stable and uniform. The author concludes by drawing attention to the neglect of the use of antimony, though it enjoyed the favour of Sydenham, Latham, and Trousseau.

4832. *Martin on the use of Manganese as an Emmenagogue.*—In the *Chicago Med. Jour.*, Dr. Martin states that peroxide of manganese, in doses of 2 to 2½ grains every four hours, is most useful in restoring tone when amenorrhœa is due to some previous depression. It is especially good in the irregularity of menstruation met with in weak girls, and also in cases of menorrhagia due to anæmia.

4833. *Stallard on Paraldehyde.*—In the *Pacific Med. Jour.*, Dr. Stallard speaks of the value of paraldehyde in cases of insomnia. The dose for mild cases is 15 minims, which has seldom to be repeated. In cases of cardiac asthma with insomnia, and of mild delirium from alcohol, the dose required is 20 minims. There are no disagreeable after-effects, and no difficulty is experienced in leaving off the drug.

4834. *Whitehead on Santonin in Amenorrhœa.*—In the *Lancet*, September 1885, p. 430, Mr. W. Whitehead draws attention to the value of santonin in the treatment of some forms of amenorrhœa, especially when associated with chloro-anæmia. Some years ago, the author prescribed ten grains of santonin for a young lady aged 17, who was supposed to be suffering from worms. This dose was taken on two consecutive nights, but no worms were discovered. A few days afterwards, however, the girl menstruated; she had not done so for many months previously to taking the powders. Some time afterwards, the author thought he would try the action of santonin in another case of chloro-anæmia. The same doses were given as in the previous case, with the same results. Since then the author has often given santonin in cases of chloro-anæmia, and has invariably noticed that menstruation appeared very shortly afterwards. [A reference to the *Medical Digest*, sect. 397 : 4, will show that often even moderate doses of santonin have been followed by very urgent symptoms. Doses of 3 grains have in the reporter's practice caused very unpleasant symptoms, and he would venture to suggest caution in giving so large a dose as 10 grains.—*Rep.*]

4835. *Lépine on the Treatment of Pneumonia by Intraparenchymatous Injections.*—In *L'Union Médicale*, August 1885, M. Lépine advocates the use of a very weak solution of corrosive sublimate as an injection into the lung, on about the third or fourth day of an attack of pneumonia, with a view of preventing the extension of the disease. About 20 to 25 cubic centimètres of 1 in 40,000 solution of bichloride of mercury, are injected into three or four parts of the lung, chiefly near the periphery of the lesion. By this means it was observed that (1) at the seat of infection an immediate diminution of râles and tubular breath-sounds took place; (2) later on, sometimes an exacerbation of temperature was noticed; (3) the following day, there was a great improvement in the general condition of the patient; and (4) a very much earlier resolution than there is in ordinary cases. The author injects 20 to 25 cubic centimètres of 1 in 40,000 solution of bichloride of mercury. Care must be taken to keep away from the large vessels at the hilus of the lung.

4836. *Pearson on the Value of Liquor Sodæ Chloratæ in Enteric Fever.*—In the *Lancet*, September 1885, p. 520, Dr. Pearson directs attention to the great value of liquor sodæ chloratæ in the treatment of typhoid fever. The author's experience extends to over one hundred cases treated by this drug in the colony of the Cape of Good Hope. The following is the treatment adopted. Fifteen minims of a solution of chlorinated soda are given every three hours. The diet is absolutely restricted to milk, in small quantities every hour or so. Water to moisten the lips only is allowed. When thirst is troublesome, it should be relieved by sponging the breasts and arm-pits with tepid water. Diarrhœa should not be interfered with until the stools exceed eight in the 24 hours. If the bowels be confined for over 48 hours, half an ounce of castor-oil should be given. This plan was followed by the author in all his cases, and only one death occurred. The patient, who died, was a girl, aged 14 years; she was very ill before she came under treatment, but slowly improved for three days after taking the solution of chlorinated soda; at this time, however, there was a scarcity of the drug. Two days after leaving it off, the patient died.

4837. *Richardson on Dover's Powder and its Modifications.*—In the *Asclepiad*, 1885, p. 352, Dr. Richardson speaks thus of Dover's powder. 'In many cases there is no anodyne equal to Dover's powder, no other such a soporific febrifuge. If I could envy anyone as a therapeutist, it would be the old physician who originally had the happy thought of blending astringent opium with relaxant ipecacuana, and both with a diuretic and laxative. I suspect that Dover's name, though so little is known of the man himself, is more frequently quoted than that of any other physician. It is very often a good plan to modify Dover's powder by employing other salines than sulphate of potassa. The true Dover's powder contains nitrate of potassa as well as sulphate, four grains of each; and it often seems to me reasonable to revert to this form, as the nitrate of potassa in small doses is so good a diuretic. I also often venture to use other modifications with advantage. In acute rheumatic fever I usually substitute sodium salicylate for the potash salts; in gout, bicarbonate of soda; in remittent febrile cases, two grains of quinine with five of sodium salicylate; in tonsillitis and other febrile throat-affections, chlorate of potassa. It would surely be worth the time and skill of one of our scientific pharmaceutical brethren to prepare and bring out a series of Dover's powders in these modified forms.'

4838. *Atkinson on Quinine in Pneumonia.*—Dr. F. P. Atkinson speaks most highly of the value of quinine in the treatment of pneumonia alike in young and old, asserting that, in almost every case, it prevents the disease advancing beyond the first stage, and rapidly causes resolution to take place. It does away with the necessity of poulticing; all that is necessary being the application of cotton-wool to the back and the front of the chest. Two grains every two or three hours, with hydrobromic acid and digitalis, if there be delirium, are the ordinary dose. [Quinine has long been a favourite and trusted remedy by many in the treatment of pneumonia since Corrigan praised its efficacy in 1858, and in late years many papers have appeared in the journals confirming Corrigan's views. Vide *Medical Digest*, sect. 670 : 1.—*Rep.*]

4839. *Treatment of Freckles.*—In the *Brit. Med. Jour.*, August 1885, p. 426, the following treatment is recommended for removing freckles. Dissolve twelve grains of perchloride of mercury in two ounces of rectified spirit and six ounces of distilled water. The solution is to be dabbed on daily after washing, and at bedtime. [Vide *Medical Digest*, 37 : 6.]

4840. *Allwright on the Use of Iodine internally in Pulmonary Cases.*—In the *Lancet*, August 1885, p. 419, Mr. Allwright writes that he has found great use from the internal administration of iodine in case of phthisis, or in any pulmonary case where there is an accumulation. The author commences with ten minim doses of the tincture of iodine, increasing it to fifteen and twenty minims. It rapidly absorbs the mucus, without producing any injurious effect upon the system.

4841 *Kirk on the Vesicating Properties of Methyl-Iodide.*—Dr. Robert Kirk, in a long paper, has described in the *Lancet*, Oct. 1885, p. 753, the vesicating properties of methyl-iodide, which causes, if applied under a watch-glass, active counter-irritation; the sore healing less readily than that caused by cantharides, which appears to be its sole recommendation, for it is far more troublesome to apply and costly in its price than ordinary vesicating fluid.

4842. *Jones on Cannabis Indica as a Narcotic.*—Mr. H. Lewis Jones, in the *Practitioner*, Oct. 1885, p. 251, speaks enthusiastically of the power of cannabis given in two to three grain doses as pills every four or six hours to produce sleep, and states that this is his routine practice and dose. [Surely the dose proposed is most dangerous, and can only have been taken because of the inactivity of the preparation used. Such a dose of the extract made by such chemists as Battley and Watts would cause more than one woman to go 'temporarily mad,' as the author states he has heard of. The reporter has more than once nearly lost the confidence of patients by prescribing half-grain doses, and now always begins with one-quarter grain doses of 'good' extract. Vide *Medical Digest*, 363 : 2.—*Rep.*]

4843. *Bloomfield on Antipyretics; Kairin, Antipyrin, and Thallin.*—Mr. Bloomfield, in the *Practitioner*, Oct. 1885, p. 241, contributes a very interesting paper upon these comparatively new antipyretic agents. Kairin may be given both by the mouth and hypodermically. Large doses are required to cause very marked fall of temperature. Copious perspiration follows its use, at times vomiting and rigors; when the effects pass off, a peculiar nasal pruritus and dryness of the throat, with frontal headache, are apt to result. Kairin acts by diminishing the oxygen-carrying powers of the hæmoglobin. Antipyrin does not lower the temperature in a healthy man, and is best given by the mouth. Hypodermically, it causes pain. Small and frequently repeated doses agree best if the case be chronic, but in acute pyrexia one large dose is to be given, eight to thirty grains. It is less liable to produce rigors, headaches, and tinnitus than many other antipyretics; still, a roseolous rash, vomiting, and exhaustion may arise. In typhoid fever the drug has been largely employed, reducing the temperature only, but not affecting the course of the fever. Antipyrin acts, according to Queirolo, by dilating the vessels of the skin. Thallin, which rejoices in the chemical name of tetra-hydro-para-methyloxyquinolin, derives its shorter name from the green colour it gives with perchloride of iron. Its action as an antipyretic is rapid and well-marked. Prof. Jaccoud concludes 'that in thallin we possess an antipyretic surpassing all others. None produce such an effect and none act in such small doses with so little inconvenience. Thus a dose of five to ten cubic centimètres every hour will keep the patient in a state of apyrexia, but it has no effect on the course of the disease. Thallin produces less perspiration than kairin or antipyrin, and neither sickness nor headache are liable to follow its administration.'

4844. *Cantani on Hypodermoclysis for Cholera.*—In the *Lancet*, October 1885, p. 728, are given directions how to inject water hypodermically in large volumes, as done with much success by Cantani, of Naples. The instrument consists of a double vessel: the inner one, containing two litres of fluid to be injected, is placed in the outer one, which is filled with warm water, to keep the temperature of the injected fluid constant. To the bottom of the inner vessel two India-rubber tubes are attached, two mètres long, furnished with stopcocks. Each tube terminates in another cannula, also having a stopcock which fits into the cannula of the trocar, with which the skin is perforated. The centre vessel is furnished with a tap, to draw off the water when not in use. Before use, the trocars and cannulæ are heated in a spirit-lamp. The fluid enters the cellular tissue by gravitation. If the lump formed be too large, the stream is arrested, and gentle friction employed. The sides of the abdomen and intercostal regions are those chiefly selected, and the injection is made twice, thrice, or four times a day. One litre is the usual quantity injected, but two are often used; upon one occasion three and a half litres (nearly seven pints) were injected. The absorption of the fluid takes place very rapidly, owing to the density of the blood.

4845. *Richardson on Peroxide of Hydrogen in Epilepsy.*—Among the many suggestive hints given by Dr. B. W. Richardson in the Opuscula Practica of the *Asclepiad*, he speaks, on p. 349 of the October number, of the benefit he has derived in many cases from the use of peroxide of hydrogen in epilepsy, and states his conviction that the drug demands a more extended trial than it has hitherto had. The dose is a drachm of the ten-volume solution, given thrice a day in half a tumbler of water, gradually increasing the quantity to two or three drachms. A drachm of glycerine added to each dose reduces the metallic taste.

4846. *Murrell on the Treatment of Habitual Constipation by Friedrichshall Water.*—In the *Brit. Med. Jour.*, Sept. 1885, p. 545, Dr. Wm. Murrell states that he finds Friedrichshall water of great value in the treatment of habitual constipation. The composition of this water secures to it a marked preference over ordinary sulphate of magnesia waters, probably because of the combination of chlorides with sulphates. It is not merely a saline aperient, but it has valuable properties in influencing tissue-change and promoting excretion of uric acid. It is most beneficial in cases of congestion of the liver and kidney, also as a corrective of digestion. It may be described as a tonic aperient.

4847. *Pye on the Use of Natural Mineral Waters in the Disorders of Childhood.*—In the *Med. Times and Gazette*, Sept. 1885, p. 392, Mr. Walter Pye contributes some observations on the action of Friedrichshall water upon children of all ages up to eleven years. The cases are divided into two groups, (1) those where it was given as a simple aperient in some transitory ailment, and (2) those where it was desired to produce some definite alterative effect upon a disorder of growth, or nutrition. In the first group, the author gave the drug in doses of from one-and-a half ounces to four ounces; it was found generally sufficient to produce one or two actions of the bowels without griping, but as a rule the more common vegetable laxatives of rhubarb and senna are preferable. With regard to the second group, the result of fifteen recorded cases tends to show that in Friedrichshall water we have an efficient means of quickening tissue-changes throughout the body, and especially of improving the condition and work of the lymphatic glands of the liver. It has also a marked effect in regulating the action of the intestines in the colicky attacks common in diseases of nutrition, such as rickets and congenital syphilis. In these cases it is necessary to lessen the dose after the first week or ten days, in order to avoid purging. The water should be given warm, and the first thing in the morning.

4848. *Manassein on Cucaine in Sea-Sickness.*—In the *Berliner Klin. Wochensch.*, No. 35, 1885, Dr. Manassein records his experience in the use of cucaine in sea-sickness. He gave to a man and a woman every two or three hours a drachm of the following solution: hydrochlorate of cucaine, 15 centigrammes; rectified spirit, sufficient for solution; distilled water, 150 grammes. Though both patients had always suffered extremely from sea-sickness, on this occasion they were quite free after taking the mixture. To a child, six years old, who was attacked with sea-sickness directly it rose in the morning, the treatment was so beneficial that after two doses during half an hour, followed by a third in three hours, the child was able to play about. Another case was that of a girl, aged 18, who had been very sick for twenty-four hours. She took a double dose of the cucaine solution every half-hour. In three hours she felt hungry, was able to eat, and soon became quite free from sickness. In all the cases in which the author tried this drug, he was much pleased with the result; and he believes that in cucaine we have a certain and harmless remedy against sea-sickness.

4849. *Robins on Bromide of Sodium in Sea-Sickness.*—In the *Philadelphia Medical News*, Dr. Robins states that he gives in cases of sea-sickness bromide of sodium in ten-grain doses three times a day for a week before a voyage has to be taken, and then reduces the quantity to twenty grains a day during the voyage. The author also states that a dose of thirty grains given three times daily is most useful in the vomiting and nausea of pregnancy.

RICHARD NEALE, M.D.

4850. *Bignon on Cuca and Cucaine.*—Señor Bignon, professor of chemistry in the Medical School of Lima, publishes in *Les Nouveaux Remèdes* his inquiries on the properties of cuca and cucaine. He finds that in the fresh leaves of cuca, and in those recently dried and which have undergone no fermentation, there exists only one alkaloid (cucaine), which is crystallisable and inodorous. Cuca leaves, from which all the cucaine has been completely exhausted, when submitted to the action of heat (100° C.) and of alkalies give by distillation a new volatile base of strong odour (hygrin). Hydrochloric acid, even dilute, acts slowly on cucaine, partially decomposing it. Thus solutions which are not exactly neutral suffer decomposition, become odoriferous, crystallise with difficulty, and leave a syrupy mother-liquid. Few alkaloids are so sensitive to chemical and physical actions as cucaine. This fact must be borne in mind in all the manipulations it may undergo. Cuca leaves dried during a damp season, or pressed in bags before complete desiccation, undergo a fermentation which destroys the cucaine. This destruction of the cucaine takes place gradually, but is finally complete. Fresh leaves, or those recently dried in the open air in a good season, frequently turned and protected from damp and dew, yield eight grammes per kilogramme; the better samples may even afford ten grammes or more. The best results are obtained with the pure alkaloid; the anæsthetic properties are attenuated in its salts. Contrary to the opinion generally admitted, Professor Bignon believes that the irritation produced by the alkaloid is due to the cucaine, not to the hygrin. He also believes that the dilatation of the pupil is a property inherent in cucaine, and attenuated in its salts. Solutions which do not produce this dilatation have begun to decompose, and contain a derivative, which unfortunately is easily developed, which is very soluble in water, uncrystallisable, and whose composition is unknown, although it is supposed to be a glucoside. The Indian of Peru chews approximately from 300 to 500 grammes of cuca per week. This cuca contains from five to six grammes of cucaine per kilogramme; he absorbs, then, from two to three grammes of cuca per week, or from thirty to forty centigrammes per day. The action of cucaine on the mucous membrane of the stomach is far from perfectly known. Cuca contains cucaine in the form of an inert salt, having no special therapeutic properties. The Indian, however, never chews cuca alone, but always with the admixture of lime and ashes—that is to say, with strong bases which isolate the cucaine. What he desires are the anæsthetic properties and the effect of insensibility in the mucous membrane of the stomach. The leaf has none of the special properties attributed to it. It is not nutritive, nor tonic, but only possesses those properties common to other resinous aromatic plants. For external use in general burns, catheterism, &c., and even for diseases of the eyes, Professor Bignon advises the admixture of vaseline and cucaine. For internal use and sprays, he recommends alcoholic solutions containing 20 per cent. of the alkaloid. Ten centigrammes are the medium daily dose. G. D'ARCY ADAMS, M.D.

4851. *Testa on Iodoform in Gout.*—Professor Testa (*Gazz. Med. di Torino*, 1885) recommends the use of iodoform in gout. From several experiments and clinical observations, he arrives at the following conclusions. 1. Iodoform augments the daily excretions of urea, while it accelerates the organic changes of matter and the process of oxidation. 2. The quantity of uric acid which is excreted daily with the urine, under the use of highly nitrogenised food, is diminished, inasmuch as, through acceleration of the process of oxidation, the conversion of uric acid into urea is increased. Oxaluria is diminished, through conversion of the oxalic acid into carbonic acid and water. 4. In gout, the amount of uric acid in the blood is diminished through an increase of the organic changes. 5. Hence iodoform is to be regarded as a rational remedy, fulfilling the primary indication in gout. The quantity of iodoform given daily by Dr. Testa amounted to from sixteen to twenty centigrammes (1½ to 3 grains). In seven cases of gout in which it was given, the paroxysms became less frequent, and their intensity and duration were reduced. It appears, however, to be contra-indicated, or at least to require great caution in its use, in cases where gout is complicated with an affection of the kidneys.

4852. *Otto on Hydrochlorate of Cucaine in Sea-Sickness.*—Dr. W. Otto, surgeon to the steamship *Ems*, writes in the *Berliner Klin. Wochensch.*, No. 43, that since May of this year he has used cucaine as a remedy for sea-sickness in five voyages between Bremen and New York. It was given by the author in the form of a mixture of one part of Merck's solution of hydrochlorate of cucaine and nine parts of water. Each dose for adults varied from fifteen milligrammes (0·6 grain) to two centigrammes (0·8 grain), not oftener than three times daily. Dr. Otto has not used subcutaneous injections, nor has he given cucaine to children. During the first day of administration, the patients were kept in the horizontal position. The result of the treatment was cessation of vomiting and of nausea, followed by refreshing quiet sleep. It was very successful in some cases of pregnant women. Some patients, however, in spite of cucaine, remained sea-sick to the end of the voyage.

A. Henry, M.D.

4853. *Veigelin on Aseptol.*—To verify the statements made by Dr. Annessens, of Antwerp (*see* the London Medical Record, Aug. 1885, p. 342), Mr. F. Veigelin (*Farmatz. Jür.*, No. 12, 1885, p. 177) undertook numerous experiments with Merk's preparation of aseptol, simultaneously parallel experiments with phenol and salicylic acid being made. The results obtained by the author are far from giving any support to those published by Annessens (and Terrant; *see* the *Lancet*, Sept. 26, 1885, p. 588). A 1 per cent. solution of aseptol, containing a piece of meat, by the end of six days became quite turbid, acquired a putrid odour, and covered itself with a film of mould. Under the microscope, swarms of spherical bacteria were detected. Meanwhile a 1 per cent. solution of carbolic acid remained, under the identical conditions, unchanged for several months. Similarly, a mixture of one part of aseptol with 500 of urine became turbid on the second day, and showed numerous bacteria on the fourth, while an identical carbolic mixture turned quite turbid only after a month's standing. Again, aseptol failed to arrest coagulation of milk (even in the proportion of 1 to 100 milk) or the appearance of bacteria in beer (1 to 500), or in infusion of valerian, of calumba, tobacco (1 : 1,000), &c. As to the alleged antifermentative property of aseptol, the latter could not prevent the formation of hydrocyanic acid in a solution of amygdaline, containing equal quantities of emulsine and aseptol; a solution of 2·0 yeast, 2·0 aseptol, 8·0 cane-sugar, 0·5 phosphate of ammonia, and 0·5 phosphate of potassa underwent fermentation in less than half an hour.

4854. *Simanovsky on Cucaine in Laryngeal Practice.* — Professor N. P. Simanovsky, of St. Petersburg, eulogises (*Vratch*, 1885, No. 21) the value of cucaine in cases of excision of laryngeal polypus. In six operations recently performed by the author, in two no cucainisation was employed, and the preparation of the patients for the operation had required about two months; while in the remaining four cases, cucainisation of the parts allowed the immediate performance of the excision.

4855. *Sperling on Paraldehyde in Nervous Diseases, and on Iodide of Potassium in Hemeralopia.* — In the *Russkaia Meditzina*, No. 31, 1885, p. 578, Dr. O. Sperling writes that he has administered paraldehyde as a hypnotic in three cases of neuralgia of the fifth nerve, in two of hysteria, and three of nervous asthma, and in all but one case induced sleep of six to nine hours' duration. No awkward accessory effects were ever observed. The author used the following formula. ℞ Paraldehydi ℈ij; aquæ destillatæ, syrupi emuls., āā ℥ss. To take in two doses (a tablespoonful) with the interval of an hour. Dr. Sperling states, also, that he successfully treats hemeralopia by the internal administration of iodide of potassium dissolved in water (one drachm of the salt to six ounces of water, three tablespoonfuls daily, to an adult.)

V. Idelson, M.D.

4856. *Schott on the Gymnastic Treatment of Heart-Disease.*—The treatment of heart-diseases by carefully conducted exercises continues to find favour in Germany. Dr. Schott, of Frankfort (*Berliner Klin. Wochensch.*, No. 42), is a decided opponent of the system of condemning patients to absolute rest, and giving them palliatives; his aim is to make them as active as possible, and to this end, besides baths, &c., gymnastic exercises are the chief means employed. The great danger of (gradual) stasis of the circulation, expressed in dilatation of the heart, is overcome by exercises which involve all the muscles of the body, care being taken to avoid dyspnœa and over-exertion. The lowered frequency of the pulse and respirations, and increased arterial tension, may be observed *during the exercises*, while the dilatation of the heart is shown to be lessened by the altered percussion area. These effects, at first transitory, by and by become permanent. These factors may be used as a means of differential diagnosis, and from the facility with which dilatation of the heart, &c., can be influenced by the separate exercises, prognostic indications are obtained. (Oertel carries out a systematic 'cardiac gymnastic,' by the ascents of mountains gradually undertaken, and this forms a chief element of his treatment of venous stasis, and weak heart in obesity, &c.)

E. J. Edwardes, M.D.

4857. *Roullière on the Transfusion of Serum in Cholera.*—M. Roullière, army surgeon, sends a report to the Académie de Médecine, on the results obtained by the transfusion of serum in cholera, at the Saint Mandrier Hospital, at Toulon. Out of fifty-five patients in the last stage of collapse, thirty-seven died and eighteen recovered. The quantity of serum transfused varied from 1·5 to 2 grammes. This treatment in some cases effected temporary improvement, but in the majority of cases failed to cure.

W. Vignal.

4858. *Howe on the Effect of Cucaine on the Healing of Wounds.*—Dr. Lucien Howe, of Buffalo, (*New York Med. Jour.*, Aug 8) arrives at the following conclusions from experiments on animals. 1. In lesions of the conjunctiva, perfect solutions of the hydrochlorate of cucaine have no appreciable effect, beneficial or otherwise, upon the healing process. When the solution is imperfect, a slight additional hyperæmia is produced, which persists longer than in the other eye, but this is ordinarily of no practical importance. 2. In lesions of the cornea, cucaine has a beneficial effect, like other mydriatics, but inferior to that of atropine. With imperfect solutions, a perceptible abrasion of the epithelium is produced; and, though this is quickly renewed, the healing is thereby delayed by the cucaine. 3. In wounds of the iris, the mydriatic action of cucaine is evident; but here again it is inferior to atropine, and is of little value in detaching firm synechiæ. Imperfect solutions, however, do not appear to hinder the healing process any more than when applied to the conjunctiva or cornea. Indeed, as strong mixtures possess decided antiseptic properties, they would seem to exert a favourable effect in this respect.

4859. *Draper on Antipyrin.*—At a meeting of the New York Academy of Medicine, Dr. W. H. Draper read a paper on antipyrin, and summed up as follows. 1. In antipyrin we have an efficient means of reducing temperature. 2. It is an apparently safe means, if prudently given and carefully watched. 3. While it does not modify or abate febrile diseases, it unquestionably adds greatly to the comfort of the patient. 4. Exceptionally it produces unpleasant effects, which more than counterbalance its beneficial action. 5. Further experience with it, and modifications of the present mode of its administration, may render it a precious contribution to our means of treating fevers.

4860. *Hewson on Earth as an Antiseptic.*—At the last meeting of the American Medical Association, Dr. Addinell Hewson said that he was first led to use earth as an antiseptic in 1869. He used clear yellow clay, free from sand or grit. He reiterated his claims for the utility of earth in erysipelas, measles, scarlatina, and small-pox, as well as in surgical cases. In schools the earth not only produced great benefit, but prevented contagion on the return of the children to school, insured reduction of temperature, shortened the duration of the disease, and prevented complications. He dusts the earth over the whole cutaneous surface, causing immediate reduction of 5° F. in the early stage, and 10° F. when fully developed. In small-pox and erysipelas, he mixes it with water to cause it to adhere. The addition of water raises the temperature of the clay for an hour. Allowing for this, it has always markedly reduced temperature in the first twenty-four hours; by the end of the fourth day there is never abnormal temperature (except in small-pox or scarlet fever, perhaps two degrees, lasting till desquamation). The effect of moist clay on pain is very marked, the patient expressing relief during the dressing, and usually going to sleep. If there be pain in the chest in measles, clay is applied to the chest.

PATHOLOGY.

RECENT PAPERS.

4861. SCHUCHARDT. — Etiology and Statistics of Affections of the Male Breast. (*Arch. für Klin. Chir.*, Band xxxi., p. 1-59; and *Schmidt's Jahrbücher*, Band ccvi., No. 5.)

4862. UNKOVSKY, NIKOLAI G.—Micro-organisms in Condylomata. (*Vratch*, 1885, No. 14, pp. 217-9.)

4863. BÓKAI.—A Diverticulum of the Urethra in a Child. (*Pester Med. Chir. Pr.*, No. 22, 1885.)

4864. FERRAN.—The Chemical Virus of Asiatic Cholera. (*El Siglo Medico*, Aug. 23, 1885.)

4865. BUSH.—A Case of Rupture of the Aorta. (*Bristol Med.-Chir. Jour.*, No. 8.)

4866. THAON. — Infectious Broncho-Pneumonia of Childhood and its Microbes.

4867. NOCARD.—The Cultivation of the Bacillus Tuberculosis.

ART. 4861. *Schuchardt on Diseases of the Male Mammary Gland.*—Gurlt, in a series of 1,440 cases of cancer of the breast, collected by himself, found that only 8 occurred in the male. Dr. Schuchardt, of Gotha, agrees with Paget in finding that the proportion of cases of the same disease in the same organ in the two sexes may be estimated at 2 per cent for men, 98 for women. He has collected 272 cases of new growths of the male mamma, and made full allowance for inaccurate records, and for the great differences and frequent changes in opinion and definition with regard to tumours. Dr. Schuchardt classifies his series thus: heteroplastic tumours, chiefly true cancer, 247 cases; enchondroma, 1; calcareous deposit, 1; adenoma, 2; fibroma, 3; myoma, 1; cystic tumours, 15; tubercle, 2. Of these cases the countries where they were observed are thus represented: England (? United Kingdom), 154; France, 56; Germany and Austria, 42; North America, 8; Italy, 4; Holland, 2; Belgium, 2; Switzerland, 1; Portugal, 1; Denmark, 1; Sweden, 1. [Considering that pathological and clinical records are well cared for in several of the countries above mentioned, it is doubtful whether the disparity be entirely a matter of care or neglect of case-taking and surgical registration.—*Rep.*] Out of the 247 heteroplastic tumours, 147 are described according to contemporary ideas on pathological accuracy. In 90 the age is given, thus: under 20, no cases; 20 to 29, 3; 30 to 39, 8; 40 to 49, 26; 50 to 59, 27; 60 to 69, 16; 70 to 79, 9; over 80, 1. In 68 cases where the side was specified, both breasts were attacked in 3 cases, the right only in 32, the left in 33. The shortest duration was three months, the longest fifteen years. The greater number lasted from one to four years. Out of 51 cases, ulceration was observed in 46; out of 53, infiltration of the axillary glands existed in 42. Dr. Schuchardt further discusses enlargement and tenderness of the male breast at certain periods of life. Langer, Gruber, and Luschka have all described the structure and development of the male mamma. The inflammation, often suppurative, of the infantile breast, which frequently appears four or five days after birth, is due to uncertain causes. [It is well known to be very often due to the barbarous practice of 'breaking the nipple-strings.'—*Rep.*] Albers and Langer have written on *mastitis pubescentium virilis*, the very common tenderness of the breasts in youths at puberty. Langer attributes it to a sudden though abortive growth of the mammary glandular tissue. The breast becomes swollen and tender, the nipple prominent and pigmented, but suppuration is very unusual, the swelling subsiding in two or three weeks. Stümcke observes that the swelling is rarely unilateral, but, when it is so, the left gland is attacked. In cases which he had treated, the swelling often lasted for months, but always ultimately subsided. Baumgarten in seven years treated sixty cases, in youths ranging from fourteen to twenty years of age. It is possible that gynæcomastia, or permanent enlarged breast in males, may, in many instances, be a continuation of the morbid process which begins as *mastitis pubescentium*. ALBAN DORAN.

4862. *Unkovsky on Micro-organisms in Acuminated Condylomata.*—In the *Vratch*, No. 14, 1885, p. 217, Dr. Nikolai G. Unkovsky, of Moscow, reports that he has succeeded in finding micro-organisms on microscopically examining acuminated warts removed from three patients. In one of them, a schoolboy, aged 17, the new growths had appeared on the prepuce after gonorrhœa; in another lad, aged 18, the warts were found on the glans, the patient being operated on account of phimosis; and the third patient, a school-girl, aged 12, with atrophic rhinitis, had acuminated condylomata along the edge of the nostril. The results of the microscopic examination were identical in all the cases. In every case, there were found, beside usual increased vascularisation of the papillæ, hypertrophy of the mucous layer, infiltration of the latter with round cells, &c., an enormous dilatation of lymphatic slits, very many of which contained large colonies of micrococci glued together by a muco-gelatinous substance. The nearer the base of the wart, the larger were the lymphatic slits, and the more numerous were the colonies of micrococci lodged in them. The microbes of condylomata took in stains but very slightly; at all events, the author succeeded in staining (with fuchsin, after

Cradle's method (only a few individual micrococci. Cultivation experiments were very successful. As yet, inoculation has not been attempted by Dr. Unkovsky. V. Idelson, M.D.

4863. *Bókai on a Diverticulum of the Urethra in a Child.*—Dr. Bókai, of Buda-Pesth, relates the following case (*Pester Med. Chir. Pr.*, No. 22; and *Deutsche Med. Zeitung*, Sept. 7). A boy, aged 3½, was admitted to hospital with retention of urine. On the penis, there was a swelling as large as a pigeon's egg, with a broad base, fluctuating, but not inflamed; it communicated with the urethra, and contained urine. The retention continued, and the child had to be regularly catheterised; it finally died of cystitis and suppurative nephritis. [The reporter in the Berlin journal asks why no operation was performed.] At the necropsy, there was found in the lower wall of the urethra, about 1½ inches from the terminal orifice, an elliptoid opening 14 millimètres wide, in the duration of the axis of the canal; it led into a diverticulum of the size of a damson. The diverticulum was lined by a continuation of the urethral mucous membrane.

A. Henry, M.D.

4864. *Ferran on the Chemical Virus of Asiatic Cholera.*—Dr. Ferran, in a recent note to the Academy of Sciences of Paris (*El Siglo Medico*, Aug. 23, 1885), asserts that hypodermic injections of cultivations, in which the comma-bacillus is already dead, are prophylactic against cholera. In a former note, he maintained that the immunity determined by hypodermic injections of the comma-bacilli must be interpreted by the organism becoming habituated to the poison of the microbe. This supposition was founded on the fact that the bacillus could not reproduce itself in the cellular tissue; but this did not prove that the poison was a chemical one, and as the bacillus continued to live, although without power of reproduction, the prophylactic effects might be attributed to purely vital phenomena, instead of to the presence of a lifeless chemical substance. That the prophylactic effects are really due to a chemical poison, he shows by studying the pathogenic and preventive effects of inoculations of a 'dead' cultivation. If guinea-pigs be injected with from 2 to 8 cubic centimètres of a cultivation previously proved to be dead by unsuccessfully sowing it in a fresh medium, the animals develop the characteristic symptoms often described as resulting from inoculation. If, after these guinea-pigs have completely recovered, they be injected with a dose of a live cultivation sufficient to kill similar unprotected animals, they experience no ill effects, while those not previously inoculated with the dead cultivation die. As these dead cultivations produce, when inoculated in man, all the same effects as cultivations of living bacilli, including insusceptibility to a second inoculation, which produces no effects, it is logical to admit that these injections are equally preventive of cholera. In the intestine the bacillus, finding a favourable nidus for its multiplication, gives rise by its rapid growth to a fatal dose of the poison. In the cellular tissue it does not find this favourable nidus, and hence the quantity of poison generated is small. If dead cultivations be used, the dose injected can be even more exactly determined. The effects are like those of any other chemical poison, being strictly in accordance with the quantity present in the organism. Ferran foresees the probability of obtaining pharmacological forms, having for their basis the cholerigenic fungus or its active principle, which will give an immunity from cholera. The pathogenic microbes of other diseases may also be found to furnish a chemical virus. G. D'Arcy Adams, M.D.

4865. *Bush on a Case of Rupture of the Aorta.*—In the *Bristol Med.-Chir. Jour.*, No. 8, Mr. Bush records the case of a young man, aged 18, who soon after rowing was noticed to look ill; presently he sank back, and on landing was found to be dead. At the *post mortem* examination, the heart and pericardium were natural. Just above the anterior aortic valve there was found a rupture through the internal and middle coats of the aorta; it spread round the aorta in a spiral manner, terminating about a quarter of an inch higher than the level of its starting point, and extended one circumference and a quarter. The rent passed through the elastic coats of the aorta, and dissected the fibrous coat to the extent of half an inch upwards, whilst downwards the separation of the coats extended as far as the origin of the aorta. Richard Neale, M.D.

4866. *Thaon on Infectious Broncho-pneumonia of Childhood and its Microbes.*—At a recent meeting of the Paris Biological Society, M. Thaon showed some histological representations of the capillary bronchi and pulmonary alveoli in these affections. It was clearly seen that the effusions consisted solely of microbes lodged in pus-cells and in the pulmonary epithelial cells, which were considerably degenerated. These results can be always obtained if the necropsy be made within twenty-four hours after death, and in cool weather. The 'most recent' areas of pulmonary lesion must be chosen, and treated with colouring reagents which do not alter the microbes.

M. Thaon found in the lungs two varieties of microbes described by Löefler in diphtheritis, zooglœa and bacilli; but he differs from that scientist concerning their relative importance in the etiology of that disease. Herr Löefler believes the bacilli to be the important factor, and M. Thaon says the zooglœa are invariably present; they appear at the onset, but the bacilli are only seen later on in the progress of the disease; their habitat is the extremity of the capillary bronchi, in tissues which have been attacked some time back. M. Thaon classes broncho-pneumonia under three heads—tuberculous broncho-pneumonia, diphtheritic broncho-pneumonia, and the broncho-pneumonia of whooping-cough and measles. The above description applies to diphtheritic pneumonia; the broncho-pneumonia of measles and whooping-cough is clearly distinct from that of diphtheritis. At the outset small isolated nodules appear, as small and delicate as tubercular granulations. They resemble leucocytes, and are constituted by acinous pneumonia and round elements. They are coloured a deep red when treated with carmine, are separated by a fine network of fibrine, and become fused together. They take possession of the lobules, lobes, and a portion of the lungs, proceeding from the posterior lower portion to the superior. This form of infectious pneumonia ends in suppuration. If the nodules be examined at the suppurated parts, it will be seen that the intra-alveolar cells are full of round microbes in the stage of diplococci, chains composed of three, five, or seven small seed-like bodies. These microbes are larger than those of the zooglœa of diphtheritis; the alveoli present a hyaline aspect as soon as the microbes exceed a certain number. On the surface of the capillary bronchi, and in the alveoli presenting a more advanced pathological condition, there are layers of bacilli of uniform length, not more than five millimètres; they are isolated, not in tufts.

M. Thaon strongly urges the necessity of separate hospitals for the infectious diseases of children. In hospitals, measles and whooping-cough kill a large proportion of the patients; whereas in private houses, where they are not exposed to contact with air impregnated with bacilli, these cases are rarely fatal. The separate pavilions organised in 1882 have not been satisfactory in their results. The mortality in them is five out of six.

4867. *Nocard on the Cultivation of the Bacillus Tuberculosis.*—At a recent meeting of the Paris Biological Society, Professor Nocard, of Alfort, stated that he had succeeded in cultivating the bacillus tuberculosis. On pursuing Koch's method he arrived at negative results. He therefore modified the cultivation medium by adding 1 per cent. of peptone to horse-serum, and the same proportion of sodium chloride. These additions were made before gelatinisation was effected. The first three cultivations were made according to this method; the fourth was effected in pure serum of horses' blood, but the process was slower. According to M. Nocard, all domesticated birds are liable to tuberculosis; the bacillus found in them is identical with that of tuberculous mammals. In 1884, Johne (*Zeitsch. für Microscopie und Fleisch.*) published some facts concerning a poultry yard, which was infected with tuberculosis on the arrival of a phthisical person, whose sputa was poured on to the dung-heap in the poultry-yard. M. Nocard has published, in the *Recueil de Méd. Vétérin.*, three instances similar to that described by Herr Johne. Careful investigation demonstrated that the birds succumbed after tuberculous sputa were mixed with their food. M. Nocard's data furnishes proof that tuberculosis can be communicated to birds by animals. At Nevers, there is a tripe-shop attached to the slaughter-house. The proprietor of the shop has a small poultry-yard; most of the birds in it die from tuberculosis; they are fed on diseased parts of the animals unfit for sale, especially lungs, liver, spleen, and tuberculous glands. By inoculating with tuberculous matter from animals or mixing it among their food, M. Nocard has killed four fowls, six pigeons, and a turkey. These all died in a short space of time, varying from six weeks to four months. In three instances they were fed on chopped up lungs and tuberculous glands, removed from a horse and two cows, all of which were phthisical. M. Vignal, at the meeting of the Paris Biological Society, pointed out that the addition of sugar, chloride of sodium, and peptone to serum, constituted a completely new cultivation medium. W. VIGNAL.

ANATOMY.

RECENT PAPERS.

4868. WAGNER.—A Case of Gynæcomastia (Dextri Lateris). (Virchow's *Archiv für Pathologische Anat. und Physiol.*, Band ci., Heft 2, Aug. 1885.)

4869. SOLGER.—The Significance of the Linea Semicircularis Douglasii. (*Morpholog. Jahrbuch.*, Band x., p. 102; and *Schmidt's Jahrbücher*, Band ccvi., No. 5.)

4870. MACDONALD.—Two Cases of Single Kidney. (*Lancet*, May, p. 979.)

4871. EDWARDS.—An Anomalous Human Lung. (*Amer. Jour. of Med. Sciences*, July 1885.)

ART. 4868. *Wagner on a Case of Gynæcomastia.*—W. F., a potter, aged 21, was born in Stralsund; there was no history of deformity or of consanguineous marriage in his family. When 16 years of age, the right mammary gland began to develop rapidly, apparently from frequent rubbing of a cord against the right side of the chest. The gland was only tender on direct pressure, and the patient came under the care of Dr. A. Wagner, of Ribnitz, on account of a trifling accident; the condition of the breast was then first noticed by a medical man. Dr. Wagner found him to be a man about 5 feet 8 inches high, slender, with large eyes, prominent brows, thick, dark hair, each hair being very stout, and a very weak beard. His voice was deep and manly. [The illustration accompanying the paper is taken from a photograph; the patient's features appear perfectly masculine.—*Rep.*] The left breast was as is usual in a young man, the right was enlarged and hemispherical, its diameter 4½ inches, and its consistence precisely like that of the breast of a young girl, the glandular substance being very clearly definable to the touch. The right areola was rather more developed and darker than the left, but no milky fluid issued from the nipple as has been observed in other cases. The genitals of the patient were very well developed, and his sexual appetite and conjugal relations perfectly normal. Dr. Wagner observes that, according to Schuchardt (Langenbeck's *Archiv für Klin. Chirurgie*, Band xxxi., Part i.), 272 cases have been collected. In many instances the enlarged breast was painful (Nélaton, Bryant, and Leisrink). In Bryant's case (*Lancet*, Vol. i., 1868, p. 285) the abnormal gland was inflamed. In a large proportion of the cases the enlargement was not strictly glandular, but almost confined to the fat and cellular tissue (Wagner, of Lemberg, *Oest. Med. Jahrbücher*, Band xix., St. 3, 1839). In this case the right upper extremity, especially the hand and finger, were hypertrophied. J. C. A. Mayer and Wenzel Gruber, declare that castrated subjects have larger breasts than other men, and the latter describes a case where the abnormal enlargement commenced a few years after the removal of one testicle. Paulicky has detected a relation between defective development of the male organs and gynæcomastia. C. Weber and others have observed effeminacy in body, mind, and habits in males with abnormally developed breasts; and Bédor, as well as other observers, have frequently found that such persons are strumous.

4869. *Solger on the Semilunar Line of Douglas.*—In most works on human anatomy, it is taught that the rectus abdominis is enclosed in a sheath formed anteriorly by the aponeurosis of the external oblique and half that of the internal oblique, and posteriorly by the remainder of the divided aponeurosis of the latter muscle, blended with the aponeurosis of the transversalis; but that the posterior part of the sheath is incomplete, as the aponeuroses pass abruptly to the front a little below the umbilicus. Hyrtl and Retzius believed that the bare portion of the back of the rectus formed the anterior boundary of a *cavum præperitoneale*, intended to receive the bladder when distended. Retzius himself did not consider that the semilunar line of Douglas represented the sharply defined lower border of the aponeurosis of the transversalis [another explanation of the peculiarity in the posterior part of the sheath of the rectus.—*Rep.*]; but he held that it was the border of a fold in the sheath of the rectus. Henle believed that the disposition of the posterior part of the sheath was designed for the admission of the epigastric vessels, and their protection above the level of the semilunar line. Professor Solger, of Halle, believes that the disposition of the sheath posteriorly has reference to the mechanism of respiration. At the height of inspiration, the bony and cartilaginous borders of the lower thoracic outlet gain greatly in breadth. This causes passive tension of a square surface of the muscular anterior wall of the abdomen. The apices of the angles of the square lie at the ensiform cartilage, at the middle point of the semicircular line of Douglas, and at the lowest point of the borders of the ribs, as they stand at the height of inspiration, on each side. The aponeuroses of the abdominal muscles form a powerful check to any forcible effort to increase the lateral and antero-posterior diameter of the thoracic outlet. When the glottis is closed at the height of forced inspiration, this passive tension acts on the abdominal walls almost like an expiratory effort, and the ribs are pulled slightly downwards. The tension involves the whole of the upper and middle part of the internal obliqui and transversales to the level of the anterior superior spine of the ilium, including all the portions of those muscles which are attached to the bony skeleton and to the linea alba. The lower part of the same muscles arises from a movable point, Poupart's ligament, and is much weaker than the upper, and escapes tension during forced inspiration. The line dividing the two segments of the muscles passes between the iliac spines and runs along the semicircular line of Douglas. The absence of tension in the lower segment at the height of forcible inspiration may be observed in the live subject. The aponeuroses of the two muscles are very stout in the upper segment, exposed to tension, but very thin in the lower segment, which is guarded from tension. The line of junction of the thick with the thin part of the aponeuroses of the internal obliqui and transversales, then, constitutes the semicircular line of Douglas. [Henle must be at least partly correct in his theory, above noted. The lower part of the epigastric vessels is in relation with the lower segment of the muscles, and thus preserved from frequent and pernicious tension.—*Rep.*] ALBAN DORAN.

4870. *Macdonald on Cases of Single Kidney.*—In the *Lancet*, May 1885, p. 979, Mr. P. W. Macdonald records two instances of congenital absence of one kidney met with at the Dorset County Asylum. Both cases were met with in the *post mortem* room. One was found in a man who suffered from epileptic dementia. On reflecting the mesentery and small intestines, one large kidney was found lying on the spinal column, opposite the second, third, and fourth lumbar vertebræ. It weighed 11½ ounces, and was irregular in shape. The vascular supply was obtained by one branch from the aorta, and a second from the left common iliac artery. There were two ureters, one at the normal pelvis, the other above it. Both entered the bladder normally. There were two suprarenal capsules, one situated on each side of the eleventh dorsal vertebræ. The second case was that of a female, also the subject of epilepsy. On examining the body *post mortem*, no right kidney or ureter could be detected. The left lay in its normal position, and weighed nine ounces. The suprarenal capsules were normal. There were two renal arteries; one large, coming off from the aorta below the superior mesenteric artery, and a second smaller one, an inch below the larger.

RICHARD NEALE, M.D.

4871. *Edwards on an Anomalous Lung.*—In the *American Journal of Medical Sciences*, July 1885, Dr. A. Edwards records a case of a right human lung with *four* lobes. The upper lobe was normal, bearing the proper relative proportion to the remaining parenchyma; the middle lobe was somewhat small, as was also the lower; and between the two was the anomalous fourth lobe, formed partly at the expense of the middle and lower lobes. 'The supernumerary lobe was quite as long as a man's hand, measuring from 6½ to 7 inches. At its widest part it measured 2¼ inches, tapering to ¼ inch, and finally to the thin border, as in the other parts.' Its tissue was perfectly normal, and it apparently did its work equally as well as the rest of the lung. Professors Leidy, Pepper, Osler, and Da Costa had never seen such a case, but Professor Osler had seen a two-lobed right lung and a three-lobed left lung. Dr. Collins (on 'Accessory Lobes of the Human Lungs,' *Trans. Royal Irish Acad.*, Vol. xxv., Part vii., p. 329) records a threefold abnormality in the right lung, pleura, and vena azygos. Just above the posterior part of the root was an accessory lobe, somewhat pyriform in shape; length 4 inches, breadth in widest part 2½ inches. The lobe lay in an accessory pleural pouch upon the five upper dorsal vertebræ, and the azygos vein had an irregular course. Comparative anatomists, says Dr. Collins, have shown that a fourth lobe in the *right* lung, which makes its first appearance in many mammalia, is very constantly found in other mammals. A similar lobe to this, 'lobus impar,' once regarded as forming a distinctive difference between the lungs of quadrupeds and of man, has been found in the right lung in man by Pozzi (*Revue d'Anthrop.*, 1872, p. 443). This was the first case in man. Dr. Edwards says his is the second, as regards the right lung at any rate. E. J. EDWARDES, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

4872. AGNEW.—Removal of Dislocated Crystalline Lens. (*New York Med. Record*, Aug. 8.)

4873. ROOSA.—Extraction of the Lens in the Capsule. (*New York Med. Record*, Aug. 8.)

4874. ANDREWS.—Treatment of Purulent Conjunctivitis. (*New York Med. Record*, Aug. 8.)

4875. MITTENDORF.—Pneumophthalmos: or Air in the Vitreous Humour. (*Boston Med.-Chir. Jour.*, Aug. 6.)

ART. 4872. *Agnew on Removal of Dislocated Crystalline Lens.*—At the annual meeting of the American Ophthalmological Society, Dr. C. R. Agnew, of New York, read a paper on an operation for removal of dislocated crystalline lens. The pupil was dilated with atropine. The patient was then etherised, and cucaine was applied. The eye was secured with fixation-forceps. An instrument resembling a two-pronged fork, termed a bident, was introduced into the vitreous chamber behind the dislocated lens, pressing it forward. The bident transfixed the eye and held the lens in position. Section was then made in the ordinary manner, and the lens removed. The eye recovered without any unpleasant symptoms. The speaker did not allege that all dislocated lenses should be removed, but this instrument facilitated the operation when it was required. Dr. David Webster, of New York, described a case of extraction of a dislocated lens by the aid of Dr. Agnew's bident. Dr. H. Knapp considered the bident which was exhibited to be an ingenious instrument. For the last six or eight years he had not introduced an instrument within the globe to facilitate the removal of the lens. This he was able to accomplish by external manipulation. Dr. C. R. Agnew suggested that the bident might also be useful in the removal of foreign bodies from the interior of the eye.

4873. *Roosa on Extraction of the Lens in the Capsule.*—At the last annual meeting of the American Ophthalmological Society, Dr. D. B. St. John Roosa, of New York, read a paper on the extraction of the lens in its capsule. For the past three years he had been in the habit of removing the lens in its capsule, in a large proportion of cases without iridectomy. The use of cucaine had facilitated the operation. He referred particularly to the method of dislocating the lens. The section is made as usual, but large. After puncture and counter-puncture are made, the knife is turned on its back, so that it rests on the iris. The knife is then moved up and down two or three times until the lens is seen to move; then the section is completed, and the lens can usually be removed with no loss of vitreous humour. The manipulations on the cornea are made with one or two spoons. Sometimes after the operation the iris is rolled under, but in many cases the pupil is circular. The writer had performed the operation between thirty and forty times, and was satisfied with his success. If the lens be not dislocated, iridectomy may be performed and the ordinary operation practised.

4874. *Andrews on the Treatment of Purulent Conjunctivitis.*—A paper on this subject was read by Dr. J. A. Andrews, of New York, at the annual meeting of the American Ophthalmological Society. The treatment was based upon the belief that the contagious element is of the micrococcus variety. He related a case in which he had secured an inoculation of the seventh generation of a pure culture of a gonococcus. He showed an instrument which he had devised to wash out the conjunctival *cul-de-sac*. It consisted of an eye-speculum with hollow arms, through which fluid may be passed. He had found solution of bichloride of mercury (1 to 10,000) serviceable, but apt to irritate. A 6 per cent. solution of boracic acid was also found efficient. A 2 per cent. solution of carbolic acid is useful, as it inhibits the movements of the white corpuscles. Irrigation should be maintained for ten minutes, in order to remove all secretion. Nitrate of silver solution (2 to 12 per cent.) is then used, and an antiseptic dressing is next applied. This consists of vaseline and boracic acid or carbolic acid; but he laid especial stress upon the importance of maintaining irrigation of the conjunctiva by means of the instrument referred to above.

4875. *Mittendorf on Pneumophthalmos, or Air in the Vitreous Humour.*—At the recent meeting of the American Ophthalmological Society, Dr. W. F. Mittendorf read a paper on the occasional entrance of air into the vitreous humour. He had seen two instances of the kind within two years; both being cases of perforation of the eye by pieces of iron or stone. The conclusions at which he had arrived were these. 1. The entrance of air into the vitreous body can occur only after a part of the contents of the vitreous chamber has escaped. 2. It is favoured by the entrance of a foreign body which makes a large gaping irregular wound of the sclera. 3. In order to allow air to enter the vitreous humour, this must either be quite fluid, or its anatomical arrangement must have been disturbed by the entrance of a foreign body, or the air must have been attached to the foreign body, and be thus carried with it into the eye. 4. The air in the vitreous humour appears like an air-bubble as seen under the microscope; it is more or less round, highly refractive in the centre, and has a sharply defined black outline. 5. Oil-globules in the vitreous humour present a similar appearance, but they look heavier, are not perfectly colourless, and their outlines are darker; they are more glittering in the centre. 6. Air-bubbles will be completely absorbed within two or three days; their presence is not a source of great danger to the eye. Oil-globules last longer, but they are likewise non-irritating.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

4876. Poensgen.—Paralysis from Exposure to Cold. (*Deutsche Med. Wochensch.*, June 4.)

4877. Camuset.—On the Relation existing between the Mental Symptoms and Anatomical Lesions of General Paralysis. (*Annales Médico-Psychologiques,* No. 1, 1885.)

4878. Williams.—A Bacillus Hallucination. (*Brit. Med. Jour.*, August, p. 424.)

4879. Kering.—A Little Observed Symptom of Meningitis. (*Berlin Klin. Wochensch.*, No, 32, 1885.)

Art. 4876. *Poensgen on Paralysis from Exposure to Cold.*—The *Deutsche Med. Wochensch.* of June 4 contains a report by Dr. Poensgen, assistant to Professor Czerny, of Heidelberg, of a case of paralysis in consequence of exposure to cold. The patient was a young man, aged 20, who spent a night in January, from midnight till 8·0 A.M., out of doors, lying on his right side on the ground in a state of intoxication. He was unconscious when found, and remained so until the evening, when severe pain in the right arm came on, which, together with a wound on the forehead, necessitated his removal to hospital on the third day. The arm below the elbow was found slightly bent, and in a position between pronation and supination, the fingers also being somewhat flexed; and this position was retained with a certain amount of rigidity. The skin was neither reddened nor discoloured, and a little œdema was the only apparent disturbance of circulation. The flexor muscles were swollen, very hard, and very tender on pressure. Muscular power and sensibility were diminished in the lower part of the arm; the hand could not be clenched, and extension of the wrist and fingers, with supination, was very painful when passively performed. The biceps was somewhat tender on strong pressure, but sensibility was intact all over the upper arm. The righ sented similar changes on its outer s muscles being tender and the sensibility

Temperature, 38°·3 C. (100° F.) The sensibility quickly improved, and was recovered in five days. The swelling abated in three days, and was replaced by diminution in size, amounting to about 1 centimètre in both extremities, which still persisted when the patient was discharged at the end of a month. The tenderness and the functional disturbances of the muscles improved also, but hard painful lumps developed in them, subsequently becoming less prominent than at first. Electrical examination, undertaken once after a fortnight, and once at the end of four weeks, showed irritability for the induced current to be diminished, and that for the galvanic current normal, while the nerve-conduction was intact. The question to be decided is whether the paralysis was muscular or nervous in origin, and, judging from the history and progress of the case, with the preservation of the nervous conduction and the presence of cicatrices in the formerly inflamed muscles, Dr. Poensgen has no hesitation in pronouncing it to have been muscular, the result of the exposure to cold.

ALICE KER, M.D.

4877. *Camuset on the Mental Symptoms and Anatomical Lesions of General Paralysis.*—Dr. Camuset (*Annales Médico-Psychologiques*, No. 1, 1885) observes that general paralysis from a pathological point of view is characterised by a chronic meningitis, and by a diffuse irregular and encroaching disorganisation of the nervous elements of the brain. He is not prepared to accept the new observations of Tuczek without question. According to Tuczek, general paralysis is produced by the disappearance of the nerve-fibres of the cortex cerebri. Ideas, the result of the function of the nerve-cells, can no longer control one another, from which follows an incoherent delirium characteristic of the disease, an absolute want of coherence in the mental conceptions. Dr. Camuset remarks that the histological observations of M. Tuczek require to be repeated by some one else; and then he asks, how are we to explain the frequent disappearance of delirium in the course of general paralysis, if it be really caused by the destruction of the nerve-fibres of the cortex, since this alteration is irreparable? It is an error to believe that every nerve-cell elaborates an idea. For the formation of even the most simple idea the union of a considerable number of cells is necessary, all of which work simultaneously. It is this cerebral mechanism which M. Ribot has ably studied, in regard to the memory, under the name of 'dynamic associations.'

[It appears to the reporter that, in studying the pamphlet of Tuczek on general paralysis, Dr. Camuset has missed one page (124) in which the German observer says that the wasting of the nerve-fibres cannot be held to explain the changes in the disposition and the delusions in general paralysis, any further than that these are facilitated by the utter want of the critical faculty resulting from the increasing dementia. Tuczek thinks that the rapid changes of mood and mental activity in general paralysis are analogous to the sudden changes from mania to melancholia or the reverse, in circular insanity. He is disposed to think that they may be explained by the influence of the vaso-motor system in the brain.

There is in general paralysis a direct connection, a relation of cause and effect, between the lesion and the dementia, but the relation is only with the dementia, for the clinical investigations as well as the data of physiology seem to demonstrate that the delirium does not directly depend on known lesions. Thus we believe that we ought to hold to the opinion of those authors who regard the morbid state called general paralysis as being a dementia *sui generis*, frequently accompanied by characteristic phenomena of delirium; these last are symptoms accessory to the disease. The anatomical condition on which they depend is unknown.—*Rep.*]

W. W. IRELAND, M.D.

4878. *Williams on a Bacillus Hallucination.*—In the *Brit. Med. Jour.*, August 1885, p. 424, Mr. Charles Williams records the case of a gentleman, aged 40, who possessed a most peculiar delusion. When he talked on ordinary topics, one could detect nothing out of the way in his manner or conversation, but if one allowed him time, he would be sure to bring in something about the 'bacillus.' He stated he had one in his blood, and that all his troubles arose in consequence; he added that he was looking at the sun one day two years ago, when he distinctly saw a bacillus enter one of his eyes, and penetrate into the blood. He would draw the bacillus on paper, and represented it by a straight line about an inch in length, and at one end of this an oval body of the size of a farthing. The oval end puzzled the patient somewhat, but he seemed pleased when the author suggested it might be a blood-corpuscle.

RICHARD NEALE, M.D.

4879. *Kering on a Symptom of Meningitis.*—Dr. D. Kering, of St. Petersburg, calls attention to the occurrence in meningitis of flexion of the legs, sometimes also of the arms, when the patient is raised up, and especially when he is made to sit on the edge of the bed with his legs hanging down. If an attempt be made to straighten the knee, the leg can only be brought to an obtuse angle of about 135 degrees. If the phenomenon be strongly marked, only a right angle can be reached. When the patient is made to stand upright, the contracture on the knees disappears. It takes place only when the thigh is at about a right angle with the body.

A. HENRY, M.D.

REVIEWS.

ARTICLE 4880.

1. *The Saline Waters of Leamington.* By F. W. SMITH, M.D. Second Edition. 12mo. pp. 96. London: H. K. Lewis.
2. *Notes of Visits to Contrexéville and Royat-les Bains.* By F. R. CRUISE, M.D., &c. 12mo. pp. 27. Dublin: Fannin & Co.
3. *Alpine Winter in its Medical Aspects, &c.* By A. TUCKER WISE, M.D., &c. Second Edition. 8vo. pp. 121. London: J. & A. Churchill.
4. *Cantor Lectures on Climate in its Relation to Health.* By G. V. POORE, M.D. 8vo. pp. 42. London: W. Trounce.
5. *The Medical Aspects of Bournemouth and its Surroundings.* By HORACE DOBELL, M.D. Illustrated. Pp. 338. London: Smith, Elder, & Co. 1885.
6. *Wegweiser zu den Heilquellen und Kurorten der Schweitz.* 12mo. pp. 71. Zürich: C. Schmidt. 1883.
7. *The Hot Mineral Bath of Bath.* Card.

1. DR. SMITH'S little book has already reached a second edition. The last differs from the first, chiefly in containing a new analysis of the springs of

Leamington, which Dr. Smith has very judiciously procured from several competent chemists. The main difference between these and former analyses is, that modern chemists set down as sulphate, what earlier ones regarded as chloride of calcium. Instead of a considerable quantity of chloride of calcium being present, which was supposed to explain the action of the waters in scrofula, the analysts now make out that in only one of the three wells is the chloride present, and in it only in the very small amount of 1·85 grains to the pint, which is quite insignificant when compared with the total solid contents, 129·93 grains—of which evidently the really important part is furnished in 92 grains of chloride of sodium. No change of analysis can, however, affect the ascertained operation of the Leamington waters.

2. Dr. Cruise contributes some agreeably written notes on Contrexéville and on Royat, at which latter place he was cured of an obstinate eczema under the treatment of our mutual friend, Dr. Petit, who continues to spread the fame of Royat by his writings. Dr. Cruise appears to have heard first of Contrexéville in 1871, and to have had more difficulty in finding any account of the place than he need have had, even at that date, for its waters were praised in 1828 by so eminent an authority as Civiale; Mamelet, 1827–1840, described them. There was a good notice of them in *Bourdon's Guide* in 1883. Dr. D. D'Estrées published a monograph on them in 1869, and by that time they had been noticed in at least one English handbook. Dr. Cruise, we observe, compares the scarcely alkaline waters of Contrexéville with really alkaline ones containing carbonate of soda, such as Vichy and Vals. It might, perhaps, have been better to compare them with the neighbouring waters of Vittel, of much the same constitution as those of Contrexéville, and used in the same complaints, or with Contrexéville's great rival, Wildungen. We are afraid that we have not quite the amount of faith in some mineral waters that Dr. Cruise has; he seems to believe in the efficacy of the Bethesda as well as of the Contrexéville waters in diabetes. However, faith varies in different temperaments. The doctor of a mineral-water station once wrote to us, that his station had never been visited by cholera, but that, if it were, he should fight the disease successfully with his mineral water. As they happened to be aperient, they might be quite as efficacious as castor-oil.

3. There is very little new matter in this edition of Dr. Wise's book. The additional pages are devoted to a full account of the internal arrangements of the vast new Sanatorium at Maloja, in which all the most modern improvements in ventilation have been introduced. Winter-life in the Alps is now highly popular in the treatment of phthisis. Time will show whether better results are got there than on the Riviera, or by sea-voyages. Our own impression, founded, however, on very slight experience, does not incline us to think the Alps favourable in cases of hæmoptysis—in fact, in lung-disease that is at all advanced; nor that their effects are in any degree more permanent than those of other stations of less elevation. We have good reason to believe that in a family predisposed to consumption that disease may develop itself at high altitudes. The question of summer visits to Alpine heights for other conditions, is an entirely different one, and the Engadine was never visited by so large a number of health and pleasure seekers as this autumn. The result was that the Maloja establishment was at last filled with guests, who speak well of its comfort.

4. Dr. Poore gives an excellent summary of the present state of our knowledge of climate in its relation to health. He treats of the chief constituents of climate, latitude, heat, light, barometric pressure; next of the effects of soil, drainage, and vegetation upon climate; and in his last lecture discusses the chief sources of atmospheric impurity, organic and inorganic, and concludes with climatic diseases and health-resorts. The general outcome seems to be, that Dr. Poore thinks climate has less to say to health and to mortality than our mode of life and our immediate surroundings have.

5. This is one of the handsomest books on health-resorts that we have seen, and it contains some excellent illustrations of the scenery of Bournemouth. The contents of the volume are as follows. Twenty-four pages are devoted to the climate of Bournemouth, concluding with the observation that it is not easy to conceive any other combination of conditions to be so favourable as the one which is to be found in that place. Nearly thirty pages are devoted to marine cachexia, and to the unusual freedom from it of the inhabitants of Bournemouth. The pine-woods and all the products of pines are discussed in the next seventy pages. Our author admits that the air of mountains is aseptic, but denies that it is antiseptic, as that of pine-wood is. In all ages the *odor sylvaticus*, especially the odour of pines, has been liked by mankind, and thought to be salubrious; but of the absolute antiseptic properties of their emanations there is no sufficient proof. More than seventy pages are called Medical and Clinical, the first part treating chiefly of the mode of life suitable for Bournemouth, including a notice of the new Mont Dore establishment and cure. The latter, headed Diseased Tracts, gives chiefly a detail of cases. Twenty-five pages are devoted to the neighbourhood of Bournemouth, and one of those strongly sulphated chalybeates, like that at Sandrock, is described. About thirty pages are occupied in giving a very complete account of the geology of Bournemouth and of its neighbourhood, while an equal number of pages is given to reasons why patients should not go abroad, and therefore should go to Bournemouth. All the drawbacks of residence abroad are detailed at great length.

This abstract of the chief contents of the work is sufficient to show its general tenor. Practitioners may pick up a good deal of information from this volume, but they can scarcely look for a dispassionate account of Bournemouth in it. That place has abundant merits of its own, and does not require overpraise. As Dr. Dobell remarks, it does not need to be written up.

6. This thin little book gives in wonderfully small space most of the points essential to be known by travellers about all the mineral waters and health-resorts of Switzerland. It avoids medical details judiciously, and does not enter into comparison with medical works, such as that of Gsell-Fels, of which a new edition has just appeared. It seems to be very accurate, and is a good model for those who compile lists of health-resorts to follow.

7. We are glad to learn that the Bath municipal authorities intend to further utilise the waters of that place, by adding to it a new bathing establishment, at a cost of 20,000*l*. In the early part of this year, the indefatigable city architect and one of the local physicians, we understand, paid a visit to Aix-

les-Bains, and studied the latest appliances at that popular resort. The new building is the result of that visit. More attention is now paid at Bath than formerly to the local application of the waters, and a *doucheur* and *doucheuse* from Aix have been engaged. We trust that a good system of *massage* will be introduced, which is useful in cases of chronic rheumatism and of thickened joints. In this respect Aix and many other French baths are much ahead of English ones. J. MACPHERSON, M.D.

ARTICLE 4881.

Lectures on Dietetics and Dyspepsia. Delivered at the Owens College School of Medicine in February and March 1885. By WILLIAM ROBERTS, M.D., F.R.S., F.R.C.P. Professor of Medicine to the Victoria University, &c. London: Smith, Elder, & Co. 1885.

DR. ROBERTS has approached his subject from a truly philosophical point of view. 'The science of dietetics must,' he says, 'be mainly based and built up on an observation and a study of the practices and customs of mankind in regard to their food, rather than upon any *à priori* data supplied by physiology. . . . We cannot doubt that, in the formation of his dietetic habits, man is guided by the same kind of instincts' (and instincts, he observes, are now explained by biologists as consisting essentially in inherited experience), 'as those which guide the rest of the animal creation in the choice of their food. The generalised food-customs of mankind are therefore not to be viewed as random practices adopted to please the palate or to gratify an idle or vicious appetite.'

Dr. Roberts, with this principle in view, has made a number of laboratory experiments on the effects of food-accessories, such as spirits, wine, beer, effervescing waters, tea, coffee, cocoa, and beef-tea, on salivary and peptic digestion. The influence of these various agents was estimated by the degree to which they retarded the process of digestion. With regard to salivary digestion he found that five per cent. of proof-spirit, brandy, or whisky did not retard digestion, but that the addition of ten per cent. of either French brandy or Scotch whisky very greatly retarded the process, while proof-spirit and gin in the proportion of even 70 per cent. had a considerably less effect. French brandy caused the greatest amount of retardation; the difference between it and whisky being probably owing to the tannin contained in the former. Ardent spirits, therefore, as commonly used dietetically, do not hamper salivary digestion, but rather favour it by causing an increased flow of saliva. Sherry, port, claret, or hock almost entirely prevented salivary digestion, even in the proportion of one per cent.; when the acidity of wines was neutralised this inhibitory effect disappeared. 'The effervescent table waters of commerce—soda water, potash water, seltzer water, Apollinaris water, &c.—are all more or less charged with alkaline carbonates; and this charge of alkali altogether removes' not only the inhibitory effect which mere carbonated water has on salivary digestion, but very greatly mitigates or wholly obviates the retarding influence of claret, hock, and sherry on the digestion of starch. A very minute trace of vinegar, 1 in 2,000, materially retarded, and 1 in 500 entirely arrested salivary digestion. Tea in the proportion of 5 per cent. (of a 5 per cent. infusion) retarded salivary digestion to a most remarkable degree, Assam being somewhat more powerful than China tea. The retardation was found to be due to the tannin, though neutralisation with carbonate of soda is said to entirely obviate it. Tea prepared by infusion for two minutes retarded digestion as much as tea infused for a long time. Coffee retarded far less; this is attributed to the fact that coffee contains no tannin, but the so-called coffee-tannic acid. Cocoa, of the strength commonly used, had no appreciable influence in retarding digestion.

The experiments on peptic digestion are of greater practical importance, though the inquiry presented greater difficulties and the results are less trustworthy, owing to two facts; firstly, that the acidity of the digesting mass in the stomach is automatically maintained at the right point; and, secondly, that soluble bodies are being constantly removed. Brandy, whisky, proof-spirit, and gin were found to have no appreciable influence in retarding digestion until they reached a proportion of 10 per cent., and the retardation was then very slight; 10 per cent. is about equal to four ounces of neat brandy or whisky with an ordinary meal. Sherry and port produce more retardation; in the proportion of 20 per cent the former trebled the time in which digestion wa' completed, and a half-pint of sherry represents 25 per cent. of the bulk of an ordinary dinner. This effect was largely due to its volatile constituents; retardation was also produced by hock and claret to a marked degree, probably from the same cause. Where small quantities only are taken with meals, the retarding effect of wines would be little noticeable, and they would probably exert a stimulant action on the gastric juice and on the muscular contractions of the stomach, but a pint of claret, hock, or champagne would materially retard the peptic digestion of an ordinary meal; a very small quantity (10 per cent.) of champagne actually quickened digestion, so that it was completed in less than the normal time; effervescing table waters had a similar effect, attributable to the mechanical operation of the escaping gas, which caused an additional stirring up of the digesting mixture. Both tea and coffee retarded peptic digestion; coffee in the strength used rather more than tea of ordinary strength; the retardation was only in part due to tannin; the alkaloids of tea and coffee had nothing to do with it, but in the case of the latter retardation was in part due to organic salts. Beef-tea and whey both retarded peptic digestion, the former having as great an effect as tea itself; the retardation was found to be due to the lactates, sarco-lactates, and chlorides of potassium and sodium; the lactates and sarco-lactates are decomposed by the hydrochloric acid of the gastric juice, chlorides and lactic acid being formed; the latter has only one-eighth or one-tenth of the digestive power of the mineral acid, and the chlorides also tend to retard digestion. Malt liquors all tended to retard peptic digestion, but with small quantities (10 per cent.) of light English or lager beer there was no appreciable retardation; the retarding effect was probably due to neutral salts (chlorides and phosphates of potash and soda). With regard to pancreatic digestion, various considerations lead Dr. Roberts to conclude that 'the effects of food accessories are practically *nil.*'

The question now arises, 'Why should the practice be almost universal among civilised races of taking with their meals beverages which retard digestion?' The plan of dietary of these races has been arrived at slowly as the result of an immense experience; it has two aims: to render the food capable of complete exhaustion, and to control the rate of digestion so that the food may be retained sufficiently long to be completely exhausted. This is Dr. Roberts's explanation, though it must be confessed that it is not clear why the retardation of that part of the process of digestion which consists in alteration of foods so as to render them soluble should favour the more complete absorption of the soluble bodies so produced. To meet this difficulty, Dr. Roberts further suggests that the human stomach is 'in some degree a storage organ for food, like the crop of birds, the paunch of ruminants, the dilatable cheek of monkeys, and the pouch of the pelican.'

The fifth and concluding lecture in this volume has a somewhat paradoxical title—'On the Acid Dyspepsia of Healthy Persons.' Acid dyspepsia is stated to consist essentially in a tendency or predisposition towards a generation or accumulation of excess of acid in the later stages of gastric digestion. From observations here recorded, it would appear that the natural degree of acidity may be nearly doubled. The acid Dr. Roberts believes to have its source in over-secretion, and not in fermentation, because he finds that even after twenty-four hours the degree of acidity produced by the latter process in a digesting mixture is very slight. The presence of butyric, lactic, and other organic acids, he accounts for (as above indicated) by pointing out that the butyrates, lactates, and other organic salts, must be decomposed by the free hydrochloric acid of the stomach. Heartburn he attributes to the irritation of the acrid fumes of butyric acid. The gas which accumulates in the stomach is derived in part from air swallowed, the quantity being large in acid dyspepsia because that condition causes a copious flow of saliva; in part to the liberation of carbonic acid from the alkaline carbonates of this copious quantity of saliva; and in part to regurgitation of carbonic acid from the duodenum, when the too acid chyme first comes into contact with the alkaline duodenal contents. In true pyrosis, with gastric cramp, the fluid which accumulates in the mouth is saliva. The extreme acidity of the gastric contents leads to a copious flow of saliva, which, when swallowed, neutralises the gastric contents, and so brings the paroxysm to an end. Any kind of lozenge rolled about and slowly dissolved in the mouth will cause an increased flow of saliva; and Dr. Roberts therefore recommends that persons who habitually suffer from acid dyspepsia should suck a gum-lozenge when the symptoms begin to make their appearance. The lozenge acts as a mechanical stimulant of the salivary flow, and at the same time the bland gummy solution swallowed has a soothing influence in the stomach.

The lectures are an important and suggestive contribution to the study of practical dietetics, and as such will well repay perusal.

ARTICLE 4882.

Practical Histology and Pathology. By HENEAGE GIBBES, M.D. Third Edition. London: H. K. Lewis. 1885.

DR. GIBBES' little manual is now too well known to need special notice. The plan and arrangement of the present edition are the same as in the last, but the letter-press has been increased by about forty pages. The greater number of these, as might be expected, have been devoted to new and improved methods of detecting bacteria, a long and particular account being accorded to the tubercle-bacillus and its many stains.

The directions for the use of the aniline-compounds for ordinary sections have been enlarged, and accounts of a few new stains added. The chapter on mounting remains the same, and we notice with surprise that no mention is made of Farrant's solution or glycerine jelly; both of these give excellent results, and their use is not attended by so much manipulation of the section as Dammar varnish or Canada balsam require. The part devoted to practical pathology, or rather, pathological histology, is very meagre, the whole being dismissed in five pages. It might be enlarged with advantage in future editions. The book closes with some useful tables for the conversion of English into French weights, for comparing the Fahrenheit and Centigrade thermometer scales, &c., and a list of addresses where reagents and materials may be obtained.

G. COULSON BULL, M.B.

ARTICLE 4883.

Insanity: Modern Views as to its Nature and Treatment. By W. T. GAIRDNER, M.D., LL.D., Professor of Medicine in the University of Glasgow, and Physician in Ordinary to Her Majesty the Queen in Scotland. Glasgow: Maclehose & Sons. London: Hamilton, Adams, & Co. 1885.

A LAUDABLE attempt has been made in this essay to throw light upon certain obscure states of mind situated on the borderland of insanity.

Long ago, Sir Henry Holland recognised the impossibility of defining unsoundness of mind; and Dr. Gairdner, following in his footsteps, asks, in his first few sentences, 'how do we assure ourselves of anything in our patient's case that should send him to an asylum rather than to an infirmary; to a hospital for the insane rather than to a hospital for the sick and hurt?'

In order to give any satisfactory answer to this important question, it appears to us that, since all efforts to draw the line sharply between sanity and insanity have hitherto failed when such efforts have emanated from scientific or historical sources, we may well try some other basis upon which we may found our diagnosis and subsequent treatment. Not only would we disregard all antiquated notions concerning mental alienation, but we would also ignore all physical symptoms, as being in themselves unimportant when the liberty of the subject is alone under consideration. The mental phenomena are the only data upon which we can rely; their quantity and quality must be weighed and tested, and the result of such examination must necessarily be concentrated in the one question, 'Is the patient or is he not *certifiable?*'

That eccentricity in itself does not constitute insanity, has been ably illustrated by the cases related by Conolly, and quite recently by Ireland in his *Blot on the Brain.* John Stuart Mill, in his essay on 'Liberty,' seems to have contended that eccentric people were of use to society in a certain way; and Dr. Gairdner mentions the eccentricities of Shelley, Byron, and Swedenborg as representing genius and thought although of a morbid kind. But all such individuals have held their peculiarities well in hand, and have been cautious not to bring themselves under the ban of the law. Their eccentricities moved in a certain groove, and were not marked by those objectless acts outside their selfish career which are almost invariably found in the history of an insane patient. Neither is healthy enthusiasm to be confounded with insanity. Plato may have affirmed that the noblest gifts of the poet, the artist, the prophet, and the orator should be regarded as a kind of 'inspired madness.' But Plato himself knew well that true madness was altogether a thing apart from the self-sacrifice practised by these men of genius, if they wished to secure admission to the temple of the Muses.

Neither, again, can we regard egregious vanity as constituting unsoundness of mind. Religion of a morbid type has been, and will ever be, mixed up with a love of notoriety amounting almost to insanity. Whether we look back upon the epidemics of the middle ages, or pass down to more recent religious demonstrations, we shall always find that enthusiasts have taken great care not to act in such a manner as to endanger their own personal liberty or comfort. Their choice of a new religion, too, has been marked by their embracing that one for which they were most suited physically and mentally. Those of an erotic temperament joined the Mormons; those requiring active exercise became Jumpers; those seeking notoriety of a quiet kind followed the two American evangelists who were too fat to dance.

Any deductions from the eccentricities of misguided enthusiasts must necessarily be erroneous, when regarded as tests of insanity. 'The lesson' (says Dr. Gairdner) 'which I propose to draw from these considerations is simply this—that the line between sanity and insanity cannot be, judging from historical evidence, very abruptly or definitely drawn. It is, therefore, not an affair of definitions, nor even of doctrines as to what insanity essentially is; but a question of practical adjustment, so to speak, between society and the individual.' With this statement, considered generally, we most cordially agree. But at the same time, regarding the matter from purely a practical point of view, we confess that we are tempted to regard the proofs of insanity of any given individual as not only affecting himself, but also the pocket of the certifier. It has been stated by certain philanthropists that it is the duty of the medical adviser to certify if, in his own mind, he be convinced that the patient is insane, regardless of the opinion of the οἱ πολλοί. Whether or no such conscientious practitioners will be found, who will risk the penalties of signing certificates when the patient is not likely to be found insane by an intelligent jury, remains to be seen. At present, they only exist in theory. Possibly, as the world grows older and wiser, they may be found in practice. But recent events have taught us that metaphysical and philosophical speculations are altogether inappropriate when a question of damages has to be considered. And until the certifying of lunatics has been shifted on to the shoulders of those who are not pecuniarily responsible, all scientific or historical estimates of insanity must fall to the ground. The chances as to whether a jury will find for the patient or the certifier will have to be gauged as accurately as the chances of a given horse winning a given race. And thus an opening for a new insurance-office presents itself. We insure our glass, our carriages, our houses, and our rent. Why not insure our capital and reputation when we sign certificates of lunacy?

Referring to the treatment of lunatics in the middle ages, Dr. Gairdner tells us that 'a considerable proportion who would now certainly find their way into asylums, were summarily executed under the severe laws in force against all these supposed antisocial categories.' That this system of treatment exists in China at the present day, is known to all travellers. Dr. Crichton Browne, presiding at a dinner of the Medico-Psychological Association, announced, amidst much laughter, that the Chinese Ambassador had sent an apology for his inability to attend on the occasion, but added that he recommended the English physicians to treat the insane by the infallible method of cure practised in China—decapitation.

Further on, we find Dr. Gairdner alluding to a similar mode of extinguishing home-rulers in the time of Queen Elizabeth. 'We find the magistrates of Somersetshire capturing a gang of a hundred at a stroke, hanging fifty at once on the gallows, and complaining bitterly to the Council of the necessity of waiting till the assizes before they could enjoy the spectacle of the fifty others hanging beside them.' This reminds us of the Duke of Wellington's remark when asked what was the best treatment to apply to Ireland. His reply was, 'Scuttle it.'

But as civilisation advanced this wholesale method of getting rid of objectionable persons was confined more to the insane. 'Under the rule of the Stuart Kings, a proportion of nearly one out of every four persons who would, with our present views, have been sent to an asylum, was actually sent to the stake, and burnt as a witch.' The interests of the ratepayers were evidently more considered in those days than they are at present, when we are contemplating building a fourth pauper asylum for Middlesex.

But we live in hopes. It may be that sanity diluted with insanity is rather an advantage to the community than otherwise. Dr. Gairdner tells us 'that Mr. John Stuart Mill regards it as one of the political dangers or disadvantages of modern society, that it tends to repress individual character; that men are too much subdued to one colour, and that they tend to act and to think in social aggregates or mobs, more or less educated; that Philistinism is too rampant, and that individuality and eccentricity have too little scope.' Should the present generation be influenced by these remarks, it may be that, in time to come, all insanity and alcoholism may be replaced by genius and eccentricity, and that those whose excesses have consigned them to an asylum at the expense of others who have led a respectable life, may by their talents be able to repay our grandchildren for the board and lodging which we have provided for them. Such a consummation is as pleasing to contemplate in theory as it is unlikely to occur in reality.

But space is limited. Let us recommend our readers to study Dr. Gairdner's pamphlet for themselves. Whether their views may be medical, philosophical, or practical, they will find in it something both to amuse and to instruct. To praise this able essay would be to attempt to gild refined gold. The position of its eminent author will ensure it a passport to the library of every one interested in the mysteries of psychological inquiry.

HENRY SUTHERLAND, M.D.

ARTICLE 4884.

Summary of New Remedies: their Physiological Action and Therapeutic Uses. By T. M. DOLAN, M.D., F.R.C.S.Ed. London: Baillière, Tindall, & Cox. 1885.

DR. T. M. DOLAN, of Halifax, has just published a little handbook, which includes a summary of the most recent additions to the British Pharmacopœia, as well as an account of several new and useful drugs. The various drugs are arranged in alphabetical order, and a short description of each is given, together with the physiological action (if known).

Turning to page 36, one will find a most instructive account of all the substances used in the form of hypodermic injections. A list is given of several specialities made in the form of compressed tablets by Messrs. Burroughs, Wellcome, & Co.; also of the chief solutions prepared by Messrs. Allen & Hanburys, and of the gelatine wafers made by Messrs. Savory & Moore. The author then gives a list of different cases in which hypodermic medications have been found useful, together with the dose required in each case. A valuable account is also given of the history, preparation, and uses of malt extracts. The error committed in the German Pharmacopœia is pointed out, where it is stated that the extract of malt is to be evaporated at a temperature of 212° F. This temperature destroys the diastase in the solution and ruins the value of the extract, since its value as a therapeutic agent depends upon the ferment, diastase. A complete list of the different oleates, with their mode of preparation, is also included, and another list of the various pancreatised and peptonised foods much used in the present day. An appendix contains a summary of some of the new active principles obtained from various drugs which can be given in the form of tinctures or pills. The most important of these seems to be 'Iridin'; it is derived from the root of the Iris versicolor, and is stated by Professor Rutherford to be a powerful hepatic and lymphatic stimulant. The above extracts will show the use of the work to the busy practitioner, whose spare moments can be well spent in reading the remarks made upon various remedies, enabling him, as it will, to find readily the required dose of any preparation with which he may not be well acquainted.

RICHARD NEALE, M.D.

ARTICLE 4885.

Croonian Lectures on the Hygienic and Climatic Treatment of Chronic Pulmonary Phthisis. Delivered at the Royal College of Physicians. By HERMANN WEBER, M.D., F.R.C.P., Physician to the German Hospital. Crown 8vo., pp. 124. London: Smith, Elder, & Co. 1885.

THE re-publication of these instructive lectures, recently delivered before the College of Physicians in London, in a neat and handy volume, will be welcome to many; those who have already become acquainted with them in the medical journals will be glad to have them for reference in this complete form, and those who have not had that opportunity will find a large amount of sound and valuable observation and practical inference in these pages.

Dr. H. Weber believes, and we share the belief with him, that phthisis is under certain conditions a communicable disease; he is also a strong and consistent advocate for the 'open-air treatment' of phthisis, as well as for the removal of phthisical patients to high altitudes, of which mode of treatment Dr. H. Weber was one of the earliest advocates in this country.

The first lecture is devoted in part to the consideration of *preventive* treatment, the second lecture to *curative* treatment, and the third to the consideration of the subject of *climates.* On all these subjects, the author has managed to condense a vast amount of useful information into this small volume, which will well repay perusal and consideration by all who are called upon to treat this disease.

While generously recognising the labours of others in this field, the author is singularly modest in claiming, as he might well have done, a very great part, by example and influence, in the improved methods of treating this disease which modern medicine employs.

J. BURNEY YEO, M.D.

ARTICLE 4886.

A Complete Pronouncing Medical Dictionary: embracing the Terminology of Medicine and the Kindred Sciences, with their Signification, Etymology, and Pronunciation. With an appendix comprising an explanation of the Latin terms and phrases occurring in Medicine, Anatomy, Pharmacy, &c., together with the necessary directions for writing Latin prescriptions, &c. By JOSEPH THOMAS, M.D., LL.D. Philadelphia and London: Lippincott Company. 1886.

A FULL medical dictionary is so useful a book, and so much care and labour has evidently been expended on the present volume, that criticism is almost disarmed. The number of entries is numerous, and the work extends to nearly 900 large octavo pages. The dictionary is particularly copious in botanical and zoological terms, and the articles on the former especially will be found short and to the point. Some of the articles falling into the latter class are wanting in precision; and this is, unfortunately, especially the case with those devoted to entozoa. The articles on Tænia Solium, Trichina, Cysticercus, and Hydatid are far from satisfactory; and Tænia Mediocanellata, Bilharzia Hæmatobia, and Filaria Sanguinis Hominis do not appear at all. The fact that the dictionary has been prepared with an eye to the wants of the 'multitudes of our young men' who 'commence the study of medicine without any previous acquaintance with Latin or Greek,' will account for such an entry as 'Oculi, gen. Oculorum, the plural of Oculus, which see;' but hardly for the persistent introduction of ordinary French words, *e.g.*, 'Moutarde, the French name for Mustard, which see;' while German equivalents are as persistently ignored; both are, in fact, out of place. Not so such phrases as *nœud vital*, or *tache cérébrale*, which do not appear. The composition of Ricord's pill, which contains the unstable and therefore dangerous green iodide of mercury, is given; while Blaud's pill, Guy's pill, and Donovan's solution are omitted. Some of the articles appear redundant: such words as emerald, ruby, tricolor, atoll, red-snow, prairie, aerolite, meteorolite, pearl, mignonette, and many more are out of place in a medical dictionary. Other articles are far too long; for example, that on Pathogenesis, which contains a long argument, confusing as it is confused, against the germ-theory of disease. This and several other long articles would have been in their proper place in a Medical Encyclopædia. The articles on the nervous system and its diseases are very poor; cerebral localisation is barely mentioned, while we can find no entries with reference to Broca's convolutions, nor Infantile or Essential Paralysis, and Tabes Dorsalis is said to mean '"Dorsal Consumption or Wasting," a disorder of the spinal marrow, consequent on venereal excesses.' The confusion is, if possible, made worse by the presence of an article on Locomotor Ataxy (in which no reference is made to the part of the cord affected) without a cross reference. The drugs and preparations mentioned in the dictionary all belong to the United States Pharmacopœia. On the whole, we regret to say that the dictionary does not seem to us at all well calculated to meet the wants of the profession in this country.

ARTICLE 4887.

Guide to the New Pharmacopœia. Epitome of Changes, Description of all New Articles, their Properties, Actions, Uses, Doses, &c., with a full Therapeutical Commentary. By PROSSER JAMES, M.D., Lecturer on Materia Medica, London Hospital, &c. London: J. & A. Churchill. 1885.

DR. PROSSER JAMES has just published a handy little guide to the many changes made in the New Pharmacopœia. The author does not confine himself to the descriptions given, in the new edition, of the processes by which various preparations are made, but gives his own opinion as to the value of many remedies. A full account is given of all the newly admitted articles; the officinal dose of every article is stated, whilst in many cases the question of dosage is fully discussed. The work commences by giving the preparations which have been increased in strength since the last edition; then the changes in nomenclature are given, of which there are over 100; but they are for the most part due to the recognition of modern chemical nomenclature, *e.g.* salts are named after their metals, and we have potassii bicarbonas, &c. Another series of changes consists in the usage of endings in *ina* for alkaloids. Next, the author tabulates all the additions and changes into Galenical groups. There are three new groups, viz., lamellæ, oleates, and tabellæ. A chapter is then devoted to the acids, of which ten new preparations are introduced, whilst four are altered. Next come the alcohols and other carbon compounds. These include, amongst other things, absolute alcohol, which is used for the preparation of liquor sodii ethylatis, the well-known caustic used by Dr. Richardson in removing nævi, &c.; butyl-chloral hydras—which has been wrongly called croton-chloral—paraffinum durum et molle—both used in the preparation of several ointments—and the salicyl compounds. The next chapter is devoted to changes in the inorganic preparations. Sulphur has been added to pulvis glycyrrhizæ compositus. Sodii iodidum is admitted, and is used extensively by many instead of potassii iodidum. Arsenic is henceforth to be called arsenium, and the word arsenic will only be recognised as a synonym of arsenious acid; two new preparations are added, the iodide of arsenium and Donovan's solution. Three new preparations of iron are added, viz., two solutions of the acetate, and a solution of dialysed iron. The compounds of mercury remain much the same; the oleate, so well known since Mr. Marshall introduced it, is added, and the green iodide is omitted. Among organic preparations there are many changes: these are divided into three chapters. No. I. contains oleum eucalypti, oleum pini sylvestris, and oleum santali, menthol, thymol, and oleo-resina cubebæ. No. II. comprises the new active principles and plants, such as caffeina, cocainæ hydrochloras, jaborandi, pilocarpinæ nitras, &c. No. III. contains all the new preparations of formerly official organic substances. Under the preparations of opium there is added tinctura chloroformi et morphinæ, which is supposed to be chlorodyne, or something equivalent to this well-known remedy. Dr. James considers this new preparation to be an excellent specimen of polypharmacy, and remarks that 'the sages of the General Council of Medical Education and Registration have abandoned their dignity, in order to fish the existing state of knowledge from the polluted streams of unscrupulous advertisements.' On coming to the preparation rhamni purshiani cortex, or 'sacred bark,' as it is also termed, Dr. James marvels at the bad Latin displayed by the Council in allowing the term 'sacred bark' to be translated into *cascara sagrada*, and then in allowing extractum cascaræ sagradæ to be written. The work concludes by giving the complete list of changes of names which have been made in the new British Pharmacopœia, with another list of preparations added, omitted, or altered. The author must have spent considerable time in putting together this guide in so neat and concise a form; and there is no doubt that every practitioner, student, or pharmacist will derive much help and gain great saving of time if he have this little book always near him until he has mastered all the changes and additions of the New British Pharmacopœia of 1885.

RICHARD NEALE, M.D.

ARTICLE 4888.

The British Pharmacopœia, 1885.

AFTER a period of eighteen years, the General Council of Medical Education have brought out a new edition of the *British Pharmacopœia.* Twenty-one preparations, which appeared in the edition of 1867, or in the addenda of 1874, have been expunged; one hundred and fourteen new preparations have been added. To say that a large amount of labour and time has not been expended would be unjust; but one must regret that many well-tried remedies have been withheld, though the editor's preface gives the reason for their absence by stating that the *Pharmacopœia* already contains drugs just as efficacious as those omitted, if not more so. Great pains have been taken in eradicating the old formulæ altogether, whilst the formulæ printed in the last edition in Egyptian type have been thoroughly revised. An alteration has been made in the nomenclature of compounds of sodium, potassium, and ammonium, so that now we see the well-known potassæ bicarbonas termed potassii bicarbonas. Again, all the alkaloids are now made to end in *ina*; instead of atropia we have atropina, and so on. Wherever a change has been made in the strength of a preparation, a footnote is given stating the strength as it was in 1867. This is especially noticeable in the case of the liquors; all of them are now made in one per cent. solutions, whereas in the last edition nearly all of them contained four grains to the fluid ounce. The information concerning drugs used hypodermically is very meagre; with reference to pilocarpine only the nitrate is officially recognised, and it is not stated whether the dose of one-twentieth to half a grain is to be given by mouth or by injection. Great satisfaction is expressed generally at the introduction of cascara sagrada under the heading of Rhamni Purshiani Cortex, as well as that by which it is best known; also at the introduction of Donovan's solution and many other well-known preparations. Though an attempt has been made to introduce chlorodyne by a preparation termed tinctura chloroformi et morphinæ, it is not a good imitation, for the quantities of chloroform and morphine are different, and the extractum cannabis indicæ is left out altogether. There has been a great outcry because only one preparation of nitro-glycerine is given—namely, tabellæ nitro-glycerini, in the form of chocolate drops, each containing one-hundredth of a grain of nitro-glycerine. This dose is much more than some patients can bear, whilst those who are in the habit of using the drug would require to take 15 or 20 chocolate drops at one dose. The most serviceable form of using this drug is the one per cent. solution: by this means one obtains a rapid action and a great saving of expense.

It is needless to attempt a detailed review of all that has been done, and what might have been done; but the profession generally must be grateful to the editors, Professors Redwood, Bentley, and Attfield, for all their labours; and to the special committee, with Dr. Quain as chairman, who have given so much time to the supervision of the work.

RICHARD NEALE, M.D.

ARTICLE 4889.

Clinical Lectures on Diseases of the Liver, Jaundice, and Abdominal Dropsy. By CHAS. MURCHISON, M.D., F.R.S., &c. Third Edition. Revised by T. LAUDER BRUNTON, M.D., Assistant Physician to St. Bartholomew's Hospital; and with Section on Tropical Diseases by SIR JOSEPH FAYRER, K.C.S.I., M.D. With 43 Illustrations. London: Longmans, Green, & Co. 1885.

THIS edition still contains the *ipsissima verba* of its author; both the editor and Sir Joseph Fayrer, who has revised the section on tropical abscess, having placed any remarks of their own within brackets. The work remains by far the best work on the subject in the English language, and it is brought thoroughly up to date by Dr. Lauder Brunton. It must be regarded as our standard work on diseases of the liver. The large number of cases (numbering in this edition one hundred and ninety) which it contains, are models of succinctness and accurate observation, and constitute a mass of information of the very best kind.

Amongst the poisons causing jaundice, Dr. L. Brunton interpolates toluylendiamine, the remarkable action of which is fully discussed. Paragraphs are added also on the surgical treatment of gall-stones. on the innervation of the liver as bearing upon diabetes, on the formation of ptomaines, &c. But it is in the domain of therapeutics that Dr. Lauder Brunton feels most at home, and the actions of saline purgatives on the liver, of perchloride of mercury, and of other substances mentioned in Rutherford's later experiments, are stated clearly and simply. On p. 685, and repeatedly on p. 686, the term 'carbonate of soda' occurs. We presume the bicarbonate of sodium is meant. The printing is excellent, and the volume is tastefully bound.

The eminently practical character of Murchison's *Diseases of the Liver* is well known, and every practitioner and student should possess it.

E. J. EDWARDES, M.D.

NEW INVENTIONS.

ARTICLE 4890.

COUSINS ON A NEW WASHABLE TRUSS.

IN the *Lancet*, August 1885, p. 383, Dr. Ward Cousins describes a new washable truss, which removes all the difficulties which surround the management of cases of infantile hernia. The instrument consists of an elastic air-cushion, which is shaped to support evenly and comfortably the lower part of the abdominal wall, and also the inguinal region, on either side, down to the fold of the thigh. In form the cushion is caudate, with a deep notch at the lower border, into which the external organs are received. On the centre of the upper border the inflating-tube is fixed. The pad is protected by a linen cover, and is securely fixed by a pelvic band of webbing, fastened in the middle line by two surgical safety-pins. The belt is held in position on each side by a narrow band, which passes through a loop attached to the lower end of the pad, and then encircles the thigh. By this contrivance the hernia can always be kept up, and does not require constant attention. The belt can be easily removed, and a clean one put on at least once a day. Messrs. Maw, Son, and Thompson supply this new truss, together with washable pads and belts.

DIETETIC NOVELTIES.

ARTICLE 4891.

THE ST. JAMES'S RUM.

CASES are frequently occurring in practice when the physician and the general practitioner find it necessary to prescribe the use of rum to their patients. The French Committee on Cholera have also recommended that rum should be administered in hot tea in the premonitory stages of cholera (*see* SANITARY RECORD for Sept. 15, 1885, p. 138). There is probably no more sound form of spirit than rum when properly matured, and it has never ceased to be the spirit in favour in the Navy, probably because it possesses properties that other spirits do not. New processes of distilling this spirit carried out by some distillers probably had an injurious effect upon its consumption; but there are still makers who rely upon the original process, and amongst these the house of Lambert, of St. Pierre, Martinique, holds a foremost position. The rum distilled by this firm is made from canes grown on the St. James's plantation in that island, and has a high reputation in many parts of the world; about 6,000,000 bottles being annually exported in the special square bottles of white glass in which this rum is put up. It is claimed that no rum is sent out from the St. James's plantation less than twelve years old, and the samples submitted to the writer, taken from stock, and which have been subjected to careful tests by experts, lead to the conclusion that the spirit is up to the highest standard of quality. It possesses a fine flavour, is soft and mellow, and is perfectly free from fusel oil. The English agents are Messrs. Christie & Co., 25 Milton Street, E.C.

Article 4892.

INVALID CHAMPAGNE.

Mr. W. Gibson, of Keppel Street, W.C., whose name was mentioned in these columns some months since in connection with the Madeira wines of Messrs. Blandy Brothers, for whom he is agent, calls attention to a special brand of champagne for invalids, shipped direct by him in quarter-bottles from 'Girandot Fils,' Epernay. It is a pure wine, moderately dry, of excellent flavour, and very moderate in price. Mr. Gibson has succeeded in getting this wine bottled in these small bottles with some little difficulty, and at the suggestion of one of his medical patrons, who, in common with many consumers, has been unable to procure a reliable quality of champagne in less than half-bottles. The makers of the finer brands of champagne object to be at the trouble of bottling their wines in less than half-bottles, and the consequence is that quarter-bottles, generally speaking, have contained wine of an inferior quality. The invalid ordered by his physician to drink champagne as a stimulant, has been obliged either to open a half-bottle, which is more than he requires, or to rely upon the champagne tap, which, at the best, is but an imperfect expedient. The profession will no doubt appreciate this addition to the list of stimulants at their disposal. Mr. Gibson has succeeded in securing a good wine and also in saving unnecessary expense to those who are ordered to take champagne in small quantities.

NEW PREPARATIONS.

Article 4893.

MESSRS. PARKE, DAVIS, & CO.'s PREPARATIONS.

The preparations of Messrs. Parke, Davis, & Co., of Detroit, Michigan, are so well known, both in this country and in America, as hardly to call for detailed notice. Their fluid extracts have attained a reputation which it would be no exaggeration to say is world renowned. Probably one of the most generally useful is the extract of Cascara Sagrada (*Rhamnus Purshiana*), the popular remedy for habitual constipation, which has recently been introduced in the British Pharmacopœia. The dose is from ten minims to a drachm, and the effects are speedy and by no means unpleasant, there being none of that griping and straining which often attends the use of ordinary laxatives and purgatives. For children and delicate women Messrs. Parke, Davis, & Co. have introduced a 'Cascara Cordial,' which may be described as a palatable laxative, alterative, and carminative. We know of many cases where its administration has been followed by a complete cure of torpidity of the bowels of long standing. The nitroglycerine pills, now largely used in the treatment of angina pectoris and cardiac affections, are excellent. Another preparation issued by this enterprising firm is dried defibrinated bullock's blood. When made into a mixture according to the directions which accompany each tin, it is taken by the most fastidious patients, either by mouth or rectum, without difficulty or hesitation. The addition of a few grains of salicylic acid as an antiseptic is perhaps, especially in warm weather, a desideratum. Messrs. Parke, Davis, & Co. have quite recently called attention to several improved forms of administering medicines, especially rare alkaloids and glucosides. Their gramme tubes or vials of colchicine, convallamarine, daturine, hydrastine, napelline, muscarine, picrotoxine, and veratrine are well worthy of attention. The binoxide of manganese pills, as a remedy for functional amenorrhœa, are largely used in America. The empty capsules for the administration of nauseous medicines are excellent, and it is a pity they are not more commonly employed. We have tried nearly all Messrs. Parke, Davis, & Co.'s preparations, and can speak very highly of them.

MISCELLANY.

Phillips on a Remedy for the Galvanic Taste.—Dr. Leslie Phillips states that a patient under his treatment finds chewing coffee effectually removes the disagreeable taste following galvanism applied to his head and neck.

A Vaccinating Lancet.—Dr. Bourgeois, a French army surgeon, has invented a new vaccinating lancet, which he has submitted to the Académie de Médecine. The incisions can be made as deep as desired with this instrument. The length is generally a millimètre. The operation is painless and almost bloodless. By means of a glass tube, a small drop of vaccine fluid is poured on to each incision, and inoculation is thus assured.

Migraine.—Dr. Norström, in an essay published by Asselin & Houzeau, entitled *Traitement de la Migraine par le Massage*, argues that the special headaches known as migraine are muscular neuralgia. Indurated areas are always present, and near the neck pressure produces pain. These areas are the result of chronic inflammation. They are generally small and amenable to the influence of massage, and M. Norström, by this treatment, generally succeeds in curing migraine, and always greatly relieves the sufferer. He puts in practice the principles formulated by Metzger.

A Prize for the Best Instrument for the Improvement of Hearing.—Baron Léon de Lenval, of Nice, has offered on the occasion of the Third International Congress for Otology, a prize of 3,000 francs for the best instrument (easily portable), constructed on the principle of the microphone, for improvement of hearing in cases of partial deafness. Instruments of this description, intended for competition, are to be sent before December 31, 1887, to one of the undersigned, members of the jury, appointed at the instance of Baron Léon de Lenval, by the Third International Congress of Otology. Such instruments only are admitted to compete as are completely worked out; at the examination the perfection of the mechanical construction, the right application of the laws of physics, and, above all, the power of improving the hearing will be taken into consideration. The verdict of the jury and the awarding of the prize will take place at the Fourth International Congress for Otology, to be held at Brussels, in September, 1888. Should none of the instruments presented be found worthy of obtaining the prize, the jury reserve to themselves the right of keeping the competition open until the meeting of the next International Congress of Otology. The members of the jury are Professor Hagenbach Bischoff, Ph.D., M.D., Chairman of the Jury, Basle (Missionsstr. 20); Dr. Benni, Warsaw (16 Bracka); Professor Burckhardt-Merian, M.D., Basle (42 Albanvorstadt); Dr. Gellé, Paris (49 Rue Boulard); Professor Adam Politzer, M.D., Vienna (1 Gonzagagasse 19).

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A delicately flavoured, concentrated, partially digested, and solidified Beef Tea, containing much of the fibrin of the beef in a soluble form. A delicious quick restorative. Tins, 2*s.* each.

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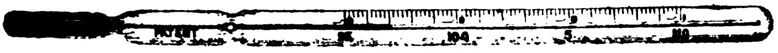

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Medical Record

A MONTHLY REVIEW OF THE

Progress of the Medical Sciences and of
Subjects relating to Public Health

EDITED BY ERNEST HART

FOR CONTENTS SEE PAGE XIII

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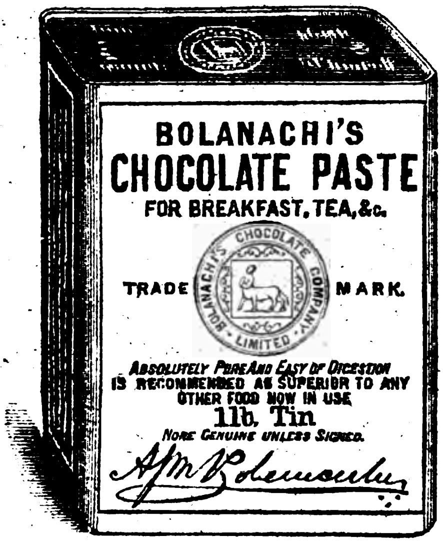
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Article 4894.

CERVELLO ON ADONIS VERNALIS IN HEART-DISEASE.

Adonis vernalis is not a new addition to Materia Medica, it having been used in medicine for several centuries. Bubnoff, in the clinic of Dr. Botkin of St. Petersburg, was the first, however, in 1880, to study scientifically its therapeutic action. In 1881, Professor V. Cervello succeeded in isolating its active principle, a glucoside, to which he gave the name of *adonidine*. Botanically, adonis vernalis belongs to the family of *Ranunculaceæ*; it grows in elevated regions in Central Europe, and is very common in southern Russia. Professor Cervello (*La Med. Contemp.*, July and August 1885) finds that *Adonis cupaniana*, which flourishes abundantly in Sicily, and flowers from February to April, possesses the same therapeutic properties; and he has recently extracted from it an active principle of similar chemical character and physiological action. In his clinical experiments an infusion of the plant was used, as the preparation of adonidine is expensive and laborious. Adonis vernalis was chiefly employed in double lesions of the mitral orifice, especially during the period of failing compensation, and, provided there was no degeneration of the myocardium, with great advantage; when degeneration of the myocardium has taken place, neither adonis nor any other remedy is of much avail. If the state of degeneration be not advanced, however, compensation may be temporarily regained, and the patient restored to comparative health. It was also tried in aortic disease; thus in one case of insufficiency of the semilunar valves, complicated with insufficiency of the mitral, there was rapid improvement under the drug, with disappearance of the dropsy. In a case of insufficiency of the semilunar valves and slight stenosis of the aortic orifice, with tendency to cerebral anæmia, the effect was bad, while much advantage was obtained from opium. In an individual with aortic insufficiency and stenosis, with symptoms due to general stasis, complete compensation was obtained, at least for some months, after which the patient was lost sight of.

The dose of adonis given is from 2 to 5 grammes of the infusion in 150 grammes of water. After the drug has been administered for some days, the patients experience a sense of well-being, the oppression which accompanies mitral mischief diminishes, sleep is more readily obtained, the respiration becomes less hurried and deeper, the pulse less frequent and more regular, fuller, and stronger. There are, in short, all the signs of greater filling of the arterial system, and of relative emptying of the venous system. The cardiac area diminishes; so does the cyanosis, which may entirely disappear; the œdema lessens, and the volume of the liver diminishes; the symptoms of pulmonary stasis also disappear. The cardiac impulse is increased, the sounds become more audible, and the rhythm more regular. The urine is much increased, even doubled, and the albumen is reduced or disappears completely. The chief effects on the circulation, then, are emptying of the overcharged veins and strengthening of the cardiac action with diminished frequency. In cases in which treatment was continued for two months, no signs of cumulative action were observed, showing that the drug is promptly absorbed and promptly eliminated.

The action of adonis vernalis resembles that of the digitalis group of remedies, but it is free from some of the disadvantages attending the administration of digitalis; it is not cumulative in action, nor does it ever seem to cause irritation of the stomach or vomiting. Like the other remedies of the same group, it is indicated in those cases characterised by weak action of the heart, especially when the arterial system contains little blood with low pressure, and consequently the venous system much blood with increased pressure. In organic lesions of the heart it is necessary to distinguish different periods; thus, according to Fernet (*Bullet. de Thérap.*, Tome ciii. p. 109), we have—1, the *eusystolic* period, in which there is only the lesion of the orifice, causing no appreciable disturbance; 2, the *hypersystolic* period, in which cardiac hypertrophy compensates the disturbance produced by the lesion; 3, the *hyposystolic* period, in which the equilibrium is destroyed and venous stasis occurs; 4, the *asystolic* period, in which the heart is affected by fatty degeneration. In the periods in which compensation exists this class of remedies is not indicated; they then only excite uselessly the heart, which is able to fulfil its office. Even in these cases, however, a beneficial effect may be obtained if the cardiac frequency is exaggerated. The ventricle, not having time to fill itself completely, sends a less quantity of blood into the arteries, and hence is produced an accumulation in the veins, and the excessive work tends to produce degeneration of the myocardium. It is in the hyposystolic period that the mechanical conditions are found which are the rational indication for the employment of these remedies. In the last or asystolic period the same conditions are found, but the cardiac muscle is now a prey to fatty degeneration, and is scarcely, or not at all, affected by remedies.

Dujardin-Beaumetz draws a marked distinction from the therapeutic point of view between lesions of the mitral and those of the aortic orifice. In the first, the aim of therapeutics should be to keep the heart up to its work, and to retard the onset of fatty degeneration; heart-tonics are therefore indicated, especially digitalis. In the second, the aim should be especially to combat cerebral anæmia and the irritation of the plexus of nerves surrounding the aorta; hence heart-tonics are contra-indicated, and remedies which stimulate the circulation and diminish the sensibility of the nerves are needed. Cervello holds that this absolute distinction is defective, while agreeing that treatment must vary with the site of the lesion. Dujardin-Beaumetz holds that aortic insufficiency is accompanied by grave disturbances of the circulation which differ essentially from those due to mitral lesions, even when arrived at their maximum intensity. In reality this is not so, not only in the last stages, but sometimes also in the first stages of aortic affections; if the left ventricle from any cause cannot exaggerate its work, and so drive into the aorta a sufficient quantity of blood, there will be a stagnation in the veins, accompanied by all the relative disturbances. Treatment in all cases must be regulated by the hydraulic disturbance of the circulation. In lesions of the right heart, venous stasis occurs quickly and is more grave; hence there is greater necessity and urgency in arousing the heart to increased activity; here adonis vernalis and other remedies of the digitalis class are especially useful. G. D'Arcy Adams, M.D.

Article 4895.

PELLACANI ON THE TOXICOLOGY OF IODINE AND SOME OF ITS PREPARATIONS.

In opposition to the opinion of Binz that the deleterious action of iodine is due to its liberation in the tissues, and to that of Högyes that it depends on its combination with the albuminoids of the blood, Professor Pellacani (*Annali Univ. di Med.*, Dec. 1884) holds that iodine is essentially a hæmatic poison, and that its poisonous effects are to be ascribed to its action on the colouring matter of the blood. In numerous experiments he found that, when iodine arrives in the current of the circulation, besides rapidly satisfying its affinity for hydrogen and the alkalies of the serum, it exerts its influence on the hæmoglobin, with which it has an equal chemical affinity, abstracting it from the red corpuscles to their partial destruction, and hence inducing a true hæmoglobinæmia, with all its consequences.

In slight degrees of iodine poisoning, the signs of hæmoglobinæmia are only found, which, as an isolated fact, is not fatal; but when the quantity of iodine introduced is considerable, the quantity of hæmoglobin dissolved and of altered red corpuscles is so great that the kidneys, participating in their elimination, feel the evil effects, and rapid and complete occlusion of the renal channels occurs with anuria, uræmia, &c. The alterations of the kidneys in such cases are never primary, due, that is, to simple elimination of the iodine, but are caused by the elimination of the hæmoglobin, which accumulates in masses in the convoluted tubules in such quantity as to give to the kidneys a dark red colour. According to Professor Pellacani, and contrary to the opinion of Böhm and Berg, the hæmoglobinuria takes place from the glomeruli as well as from the canaliculi; in these the hæmoglobin collects in crystals obstructing their calibre. He finds, moreover, that iodine not only affects the colouring matter of the blood, but that, in contact with the gastric mucous membrane it determines a necrobiosis of the superficial epithelium and minute hæmorrhage in the infraglandular spaces. In addition to this, the gastric mucous membrane presents large blackish patches, due to the combination of the iodine with the elements, especially of the peptic glands, in the process of elimination by this channel. Generally iodine induces a true turbid tumefaction in the cellular elements, while the hæmatopoietic organs feel the effects of the hæmoglobinæmia. So much for the anatomical alterations; as for symptomology, from experiments on large dogs, he finds that iodine especially affects the circulatory system, shown by phenomena of irritation followed by paralysis, and the nervous system, giving rise to phenomena of depression. The first depends exclusively on the dealkalinisation of the blood; but all the symptoms of poisoning by iodine are only found when the iodine is introduced in the free state, and as such reaches the blood.

Having examined the action of large doses of iodine, Pellacani next studies the influence of large doses of the iodides, and especially of iodide of sodium, to the ready decomposition of which Binz attributes its toxic action, especially narcosis. In herbivorous animals, the toxic action is characterised by progressive dyspnœa, leading finally to paralysis of the respiratory centre; central bulbo-spinal paralysis, chiefly motor, followed by phenomena of excitement, which the author is inclined to ascribe rather to the sodium than to the iodine.

In studying the toxic effects of iodic acid and the iodates, the author distinguishes acute from chronic poisoning. In the first, there occur phenomena of the respiratory apparatus (dyspnœa), of paralysis of vessels, increase at first of cardiac pulsations, then slowing and arhythmia, and marked diminution of the excitability of the nerve-centres. In chronic poisoning, the phenomena which occur in the dog are sufficiently complex; paralysis, cramps gradually disappearing, frequency of cardiac pulsations, diminution of sensibility, coma, &c. The iodates have a functional depressory action on the nerve-centres, independently of the hæmoglobinæmia, the symptoms of which, however, soon appear. As to the anatomical alterations, the iodates induce degeneration of the cellular elements; the renal alterations are graver than those caused by large doses of iodine; besides this, they cause simple atrophy of the nerve-cells, and the medulla spinalis presents small but abundant hæmorrhages.

Lastly, the author studies the toxic action of the organic compounds of iodine, and principally of iodoform and iodide of ethylene. The symptomatic and anatomical changes due to iodoform are analogous to those caused by poisoning with the iodates, and this because iodoform, breaking up in the organism, gives rise to the formation of iodates; it, however, exerts a special influence on the nervous system, which the influence alone of its products of decomposition is not sufficient to explain. Chronic poisoning by iodoform proves that its action is somewhat different from that of the iodates; with these it has in common the destructive influence on the red corpuscles. The anatomical changes may be wanting. It possesses cumulative powers, exercising a late action on the nerve-centres. Iodide of ethylene causes true convulsive epileptiform attacks, due to cortical irritation, a true toxic epilepsy. The anatomical alterations are entirely different from those due to other iodine compounds, although an immense quantity of iodine may be liberated in the organism.

In the treatment of poisoning by iodine and its compounds, Dr. Pellacani demonstrates the uselessness of attempts at alkalinisation: the administration of alkalies does not diminish in the least the fatal effects of doses sufficient to kill. The de-alkalinisation due to iodoform is simply secondary to facts much more complex and dangerous to life. He recommends the employment of atropine, seeing that in man the gravest effects from iodine and its organic compounds occur with phenomena of the nervous centres. Diuretics are also useful to augment the elimination of iodates, but not in cases of poisoning by iodoform or iodide of ethylene, which form their organic combinations chiefly in the nervous centres. The stimulant action of ammonia has been recently recommended in poisoning by iodoform, but the results of experiments in animals are not encouraging. Symptomatic treatment, therefore, suggested by the laws of physiological antagonism, is all that can be suggested. G. D'Arcy Adams, M.D.

ARTICLE 4896.

GUIGNARD ON THE MORPHOLOGY OF THE MICROBE OF FERRAN.

M. GUIGNARD, professor of botany, Lyons, was requested by the French Commission to give his opinion on the value of Ferran's description of the morphology of the cholera microbe. The following is a short abstract of his note, which is published in the *Bulletin de l'Académie de Médecine* with the report of the Commission.

The evolution of the microbe described by M. Ferran is unlike anything in the history of the lower organisms as at present known. Whether we have to do with schizomycetes or with peronospores, fungi relatively much higher in organisation, Ferran's microbe is endowed with a strange polymorphism, since not only does it multiply by scissiparity, but also presents the characters of sexual reproduction. Even naturalists who admit, what is not yet proved, that all forms of schizomycetes are related by transitional forms depending on the media in which they are cultivated, have never supposed that one of these forms could at a given moment assume the morphological characteristics of a peronospora or analogous fungus. The peronospores live as parasites in the tissues of phanerogamous plants, and are closely related to the saprolegnia, which only differ from them by their aquatic life on decomposing animal and vegetable bodies. Both have a vegetative body (thallus or mycelium) formed by a cell, of which the dimensions, compared to any microbe, are enormous, many being visible to the naked eye. This cell ramifies indefinitely, stretching its branches into the nutritive medium; its protoplasm contains numerous small nuclei. A true peronospora, living as a parasite in an animal or vegetable body, has two modes of reproduction.

The first consists in the formation of spores. The body of the parasite throws out branches into the exterior air, which ramify, each branchlet being terminated by a spore. The germination of the spore differs with the medium; sometimes it furnishes directly a filament which also ramifies; sometimes its protoplasmic contents divide in the water into a small number of new moving spores, or zoöspores, provided with two vibratile cilia, which at a certain moment become prolonged into filaments which ramify to reproduce the peronospora.

The second mode of reproduction is a true fecundation. The female organ is developed thus. Towards the end of vegetation, generally after the fungus has multiplied for a certain time by spores, and when the nutritive medium is becoming exhausted, certain branches of the thallus develop a sphere at their extremity, which is separated from the filament by a transverse partition, becoming an oögonium. The protoplasm condenses to form at the centre of the oögonium the oösphere, round which persists a small portion of the original contents, clearer and finely granular; this is called the *periplasm*. The male organ consists of a small branch arising near the oögonium; its extremity is a little swollen, always smaller than the oögonium, and separated from the rest of the branch by a transverse partition. This extremity forms the *pollinide*, which, without being detached from the branch, becomes applied to the oögonium. Through the membrane of the oögonium it pushes a fine process, which, crossing the periplasm, reaches the oösphere, which it fecundates.

Such are the essential characteristics of the peronospores. If one compares with them the facts observed by Dr. Ferran, one sees at once how unlikely it is that an organism starting from the form of bacillus should traverse the phases described by him to finally acquire the sexual characters of a peronospora, and these only.

Ferran has seen vesicular bodies of a greenish tint which he attributes to the presence of chlorophyll, from the extremity or in the course of the filaments of this cultivation. These are his so-called oögonia. But an oögonium never contains chlorophyll. [Ferran now states that the greenish colour attributed to these bodies was an error of observation.—*Rep.*] What he takes for a female organ has not its characteristics, neither as to development nor as to morphology. It should be noted that he adds to his cultivation-liquids, which he supposes impoverished by the production of oögonia, pig's bile, which contains many figured elements (red and white corpuscles, &c.). The same criticism applies to his *pollinide*. A small sphere, or a more or less curved filament near a large round vesicle, does not constitute a male organ. A true pollinide is a well differentiated cell, separated by a division from the branch bearing it, and which pushes a short tube into the oösphere contained in the oögonium. In the peronospores the fecundated oösphere, or egg, becomes surrounded by a distinct membrane. It rests for a longer or shorter time in a state of repose, and then does not liberate granulations, *which become dispersed in the liquid*, as Ferran describes. According to his observations, a certain number of granulations become changed into muriform bodies, which at a certain moment project forcibly one or two long and delicate filaments. These filaments become flexuous, and give rise to spores; finally, by segmentation, they give rise to the comma-bacilli. Here, again, there is nothing comparable to what is known of the evolution of microbes or of a higher fungus. 'It is evident that M. Ferran has been observing, with defective technical methods, various elements or organisms, bearing no fixed relation to each other, and which cannot be referred to any type known in natural history.'

G. D'ARCY ADAMS, M.D.

ARTICLE 4897.

TAIT ON THE SURGICAL TREATMENT OF GALL-STONES.

IN the *Lancet*, Aug. 1885, pp. 379 and 424, Mr. Lawson Tait contributes a paper on 'The Surgical Treatment of Gall-stones.' The author states that he considers Dr. Thudichum's explanation of the formation of these bodies to be the only reasonable one—viz., that they are formed of deposits of cholesterin and colouring matter round casts derived from the finer ramifications of the hepatic ducts. The great majority of cases which have to be dealt with surgically are contained within the cavity of the gall-bladder, and for clinical purposes these are divided into two varieties: 1, the solitary; 2, the numerous gall-stones. The solitary gall-stone is not always quite alone, but rarely has more than one companion. The numerous are practically indefinite in number, but generally of a pretty uniform and not large size.

The author, after describing a case of each of these varieties, makes some remarks upon the function of the gall-bladder. He states that none of the experiments which have yet been performed on the livers of animals give anything like a satisfactory explanation of this function, nor of that of the bile, nor even of the rate at which the bile is secreted. From Mr. Tait's own observations, he is perfectly certain that the flow of bile is continuous in quantity, and fairly so in quality. The function of the gall-bladder seems to be the result of the meal system of humanity—*i.e.* the secretion of bile is from time to time diverted, either wholly or partially, from the duodenum into the gall-bladder, and there stored until required; and, when required, a double stream, one from the liver and the other from the storage in the gall-bladder, is passed into the duodenum. Another novel conclusion of the author's is that the quantity and quality of the bile is greatly influenced by the condition of the peritoneum; for the occurrence of bilious vomiting is one of the earliest and most important symptoms of abdominal trouble, and if one can get ahead of this by rapid purgatives, the patient is saved from fatal peritonitis. Mr. Tait regards Seidlitz powders as far more important in abdominal surgery than all the ingenious contrivances of Lister. No clue has been obtained from observation in cases of cholecystotomy as to the time when the gall-bladder contracts.

The solitary gall-stone grows very much like a urinary calculus by consecutive layers of deposits. As it enlarges, apparently in a contraction more than usually strong for the emptying of the gall-bladder, it becomes firmly lodged in the neck of the cavity, so that no bile passes from the hepatic duct backwards into the gall-bladder. Then the secretion of the lining membrane of the gall-bladder itself plays a very important part in the pathology of the case. This mucus that is secreted contains a ferment, the nature of which the author has not found out, but it resists putrescence for a very long time. At each time of contraction of the viscus, it aids in driving the stone further and further through the cystic duct. The trouble in the gall-bladder leads to suppuration if the stone be not driven through, and then the stone may be evacuated in one of two ways: 1, by the adhesion of some piece of intestine to the inflamed gall-bladder, and the formation of a fistula between the two canals, through which the stone is allowed to pass; or, 2, by the adhesion of the base of the gall-bladder to the abdominal walls, followed by suppuration, ulceration, and the discharge of the contents of the gall-bladder through the outside wound. In cases of solitary gall-stones becoming impacted, the gall-bladder becomes greatly distended, presenting a large pear-shaped tumour, containing a pint or more of opalescent mucus, never bile. The operation in these cases is easy enough until it comes to the removal of the impacted stone, which should be taken away gradually by a kind of lithotrity.

In the cases where numerous gall-stones are found there is, in all probability, a different pathological condition from that which brings about the formation of the solitary stone, though Dr. Thudichum's explanation may apply to both cases. The gall-bladder is never distended to any extent when the concretions are numerous, and they are always found lying in bile, as the functions of the gall-bladder are more or less inactive. The symptoms are always more acute and distressing than in cases of a large solitary stone. Jaundice is a rare symptom; it can only occur when a stone is passing through the common duct, and rarely happens except during the passage of the first.

The operation for the relief of cases of multiple gall-stones differs considerably from the one adopted when the calculus is large and solitary. The difficulty exists in being sure that every stone is out of the gall-bladder; and sometimes one is left just in the duct, so that the wound, when healed, breaks open again, and a discharge of mucus comes away. The author gives details of the operation in these cases, and states his views on the method which some writers have of dealing with statistics, where they collect 200 or more operations by thirty or forty different operators, and give the death-rate of these combined as the true death-rate of the operation; whereas, if this number of operations had been performed by one skilled surgeon, there would not have been a tithe of the number of failures.

Richard Neale, M.D.

Article 4898.

CRIGHTON ON THE VALUE OF CHLORIDE OF CALCIUM.

In *The Practitioner*, Sept. 1885, p. 161, Dr. R. W. Crighton contributes a most interesting article on the therapeutic value of chloride of calcium. This drug is by no means a new one, but was well known during the last century under the name of muriate of lime.

The author has used chloride of calcium for some years past, and says he knows of no other therapeutic agent that will produce the same good results in suitable cases. In cases of glandular enlargements of the neck in children, it seems to have a wonderful effect; in many cases it must be given for a long time before any appreciable benefit is derived, and its use must be renewed at intervals to prevent a recurrence of the affection. In pulmonary phthisis, it is useful only when there is evidence of the bronchial glands being affected, but in tabes mesenterica the good effects are striking and lasting, if the disease be not too far advanced. In scrofulous caries it is also of great service. Speaking of the physiological action of the drug, it is stated, that its value is due to the activity of the chlorine, and to the especial function of lime in the assimilative and nutritive process. Chloride of calcium is one of the normal ingredients of the blood, and is present in the gastric juice.

In the *Brit. Med. Jour.*, April 1885, Dr. Sydney Ringer records some experiments which throw light on the action of this drug. If the heart of a frog have been subjected to the action of fluids, such as water or a solution of common salt, the ventricular contractions gradually cease and the ventricle stops in diastole. The only constituent which will restore the suspended contractility is lime; by adding one part of chloride of calcium to 10,000 parts of saline solution, spontaneous contractions return, and the ventricle soon begins to beat as strongly as ever. Any potassium salt has just the opposite effect. The author always prescribes the crystallised chloride of calcium, as the anhydrous salt forms a turbid solution and has an unpleasant taste. The dose given varies from 10 to 20 grains, but the author gives 1 to 3 grains for young children, and rarely over 12 to 15 grains for an adult.

[Dr. Coghill recommends 5 ounces of the crystallised salt in 12 ounces of syrup. The dose of this solution varies from 5 to 40 minims, three times a day. It is best given in milk after meals. A reference to the *Medical Digest*, sect. 274 : 2, shows that this salt has been much appreciated in the past.—*Rep.*] RICHARD NEALE, M.D.

ARTICLE 4899.

OLIVER ON LEAD-POISONING.

IN the *Brit. Med. Jour.*, Oct. 1885, p. 731, Dr. Thomas Oliver, of Newcastle, publishes a most valuable lecture on the subject of lead-poisoning. The following case is recorded.

A lead-refiner, aged 33, came under the author's care in December 1884. Early in 1883 he suffered from weakness of the arms, and had occasional fits; once he had a very severe hæmoptysis. Under the use of iodide of potassium and electricity, the patient recovered considerably. In October 1884 he was at a shooting match, and found all at once he could not see. The loss of sight was only temporary, and he continued his employment for a few days, but an attack of epistaxis, with decreasing power of vision, compelled him to give up work. Towards the end of November the patient had a fit, epileptiform in character, rendering him unconscious for some time. On admission, in December 1884, the patient presented well-marked signs of lead-poisoning. He had a loud rough systolic aortic murmur, the pulse was 104, and the arteries everywhere hard and incompressible. On examining the eyes, it was found that the discs were both very badly defined, and that the vessels of the retina could not be traced in their entirety for any distance; there were numerous white patches all over the retina, and some of the retinal vessels were ruptured. Urine was scanty, of specific gravity 1010; it contained one-eighth of albumen, which gradually increased to about one-third. As time wore on, a large bulla appeared on the under surface of the right middle finger; it gradually filled with pus, was incised, and soon healed; later on, another bulla appeared on the under surface of the big toe. The patient became gradually worse from day to day; sometimes he was quite blind, sometimes there was temporary deafness. He was frequently delirious, almost maniacal. His pulse kept about 104 to 112. Epistaxis was frequent; at times he was comatose, and on Jan. 20, 1885, he died comatose.

Dr. Oliver then contributes some valuable remarks, detailing his experiences of this disease. He says that among the earliest symptoms of plumbism he places cachexia. There are a dull, anæmic, listless look, and a peculiar fulness of the cheeks, especially in women. There are generally digestive derangement, fœtid breath, foul tongue, and retraction of the gums. The author adds that he has not noticed vomiting to be a common symptom, unless the kidneys or brain be affected; nor has he found the pulse slower than in health, but rather the reverse. Paresis of the extensor muscles of the forearm is gradually developed, which deepens by degrees into a true paralysis. Many muscles atrophy, not only from disuse but from some other cause, as it most frequently occurs in the muscles between the finger and thumb. Generally patients develop the symptoms gradually; but in many young women, who have only been working a few months in a lead-factory, the symptoms come on very suddenly, and these cases are the most serious. The author then enumerates the chief points of interest in eighteen cases that were under his care, and concludes with a few remarks on the treatment; the most successful method being the combination of the slowly interrupted current, with iodide of potassium given internally. RICHARD NEALE, M.D.

ARTICLE 4900.

BROSSARD ON SOLID TUMOURS OF THE SPERMATIC CORD.

THE spermatic cord is made up of the vas deferens and its artery, the spermatic artery, the plexus formed by the spermatic vein, the cremaster muscle and its artery and nerve, with abundant lymphatics and fat. It is the analogue rather than the homologue of the round ligament of the uterus, with which it agrees only in the fact that it occupies the same canal. The vas deferens is, according to current morphological theories, the permanent form of the efferent duct of the Wolffian body, and therefore the homologue of Gartner's duct. Not only does this canal possess a circular layer of plain muscular fibres, with an outer longitudinal layer, and, near the origin of the tube from the globus major, an extra inner longitudinal layer, but also a well-formed fibrous adventitia, containing longitudinal bundles of non-striped muscular tissue, the cremaster internus (Henle and Klein). This fact must not be forgotten in considering the origin of myoma of the cord.

Solid tumours of the spermatic cord have been described at more or less length by several British and French writers.[*] Dr. Brossard has recently collected some more records on the subject.[†] Nélaton[‡] stated that gummata and primary cancer of the cord were very rare, and fatty growths frequent, whilst he denied the development of tubercle in this situation. Brossard agrees with Nélaton, as a whole. He finds that the great majority of solid tumours of the cord are fatty or sarcomatous, and fibromata are rare, whilst only one case of primary carcinoma could be found.

Lipoma of the cord may appear as the 'fatty hernia' of Pelletan,[§] resembling an inguinal epiplocele. It is then made up of little pellets of fat, lying in the connective tissue of the cord. Each pellet is attached superiorly, by a pedicle of connective tissue, to the outer surface of the parietal peritoneum at the internal ring. In other cases it developes, lower down in the connective tissue of the cord, as small, soft, oval tumours, which fuse to form a large growth. This may distend the canal, and drag down a loop of gut.

Two cases of *fibroma* were collected by Dr. Brossard. This kind of tumour also forms in the connective tissue of the cord. In one case it distended the inguinal canal and surrounded the testicle.

Myoma has been twice observed by Lesauvage. It forms a well-defined tumour, which does not infect the inguinal glands, and never undergoes degeneration. [Walsham[*] describes a case of myxo-sarcoma of the cord in a child thirteen months old.]

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[*] Boyer (*Traité des Maladies Chirurgiques*, Tome vi.); Lesauvage (*Archives Générales de Médecine*, Tome ix., 1845); L'honneur (*Bulletin de la Société Anatomique*, Janvier 1856); Fergusson (*Lancet*, 1856, Vol. ii., p. 2); Curling, *passim*; Walsham (*Trans. Path. Soc.*, Vol. xxxi., pp. 299, 303).

[†] *Archives Générales de Médecine*, 7me *Série*, Tome xiv, p. 267, 1884.

[‡] *Eléments de Pathologie Chirurgicale*, 1869.

[§] *Clin. Chirurgicale*, Tome iii., p. 33.

[Walsham also describes[†] a remarkable case of what may be considered as an *adenoma* of the cord, or else as a teratological development of relics of the Wolffian body, homologous to the *papillomata* developed in the broad ligament of the female. (*See* LONDON MEDICAL RECORD, vol. x., p. 81, and Reporter's *Clinical and Pathological Observations on Tumours of the Ovary, Fallopian Tube, and Broad Ligament*, chaps. iii. and iv.) The patient was four years of age. The tumour measured an inch and a half in its long diameter, and was situated immediately above the testicle, and was intimately connected with the globus minor of the epididymis. On microscopical examination it was found to be made up of tubular systems of cells. (For drawings, see *Trans. Path. Soc.*, vol. xxxi., plate xxi. xxii.)—*Rep.*]

Dr. Brossard has collected nineteen cases of *sarcoma*. The disease runs a rapid course. He can give no first-hand information on *carcinoma* of the cord. *Gummata* grow in the connective tissue of the cord, and show but little tendency to soften, break down, or ulcerate.

[Some of the recorded cases of fibroma might be *fibro-myomatous*, for a muscular cremaster and the cremaster internus above mentioned are at hand. Myoma in the male inguinal canal is less probable than in that canal in the female, where lies the round ligament, a process of the uterus. See *Museum Royal Coll. Surg. Eng., Path. Series*, No. 386.—*Rep.*]

The diagnosis of solid tumours has repeatedly been discussed in text-books on surgery and in monographs and works on hernia and diseases of the testicle. The hernial descent of a small abdominal tumour might be a source of fallacy.

ALBAN DORAN.

ARTICLE 4901.

BRIEGER ON PTOMAINE.

THE *Fortschritt* (No. 20, Oct. 20, 1885) communicates a brief epitome from L. Brieger's new work, *Weitere Untersuchungen über Ptomain* (Further investigations on ptomaine).

The author, in his latest researches on the alkaloids in putrefaction, directed his particular attention to the ptomaines found in human bodies soon after expiration of life, and during the progress of decomposition and putrefaction of the different organs, and to the alkaloids forming in the secretions and in the organs of patients whose fatal disease undoubtedly was caused by the presence of bacteria.

He obtained *choline* from the lungs, the heart, liver, spleen, stomach, and the intestines of human corpses, which had been kept from twenty-four to forty-eight hours in a cool place. Besides the choline, no other basic products were discovered during the first stage of decomposition. The choline disappeared after seven days' putrefaction, after which trimethylamine was found. During the further progress of putrefaction, other basic compounds formed. Already on the third day of decomposition the physiologically indifferent *neuridine*, which with picric acid forms a but very slightly soluble double compound, could be discovered in the putrid organs, in great quantity in the putrid intestines, very little however in the spleen and the liver. After a fortnight's putrefaction the neuridine likewise disappeared.

At the same time with the trimethylamine, another ptomaine develops, which is known by the name of *cadaverine* ($C_5H_{16}N_2$). It is nearly related to neuridine; it is, like this, physiologically indifferent, and forms, when treated with hydrochloric or sulphuric acid, beautiful crystals. It occurs the more abundantly, the longer putrefaction has been progressing. It volatilises with aqueous vapours, and distils on heating its hydrochloric salt with hydrate of potassium, without undergoing any change. Cadaverine boils at 239°-248° F. (115°-120° C.), and gives out a disagreeable smell, similar to that of coniine; it may be, according to the author's opinion, that base which repeatedly has been described under the name of *cadaver-coniine* (Leichen-Coniin). With cadaverine always appears another ptomaine, putrescine, representing a clear, colourless, very thin liquid of a peculiar smell, reminding of that of seminal fluid, forming crystalline salts. It is without toxic properties, and occurs not only in the putrid glandular organs, but also in the putrescent muscles of man.

Besides these, a physiologically inactive base, *saprine*, was obtained, forming a hydrochloric salt. The base, as well as its hydrochloric salt, change like cadaverine to a blue colour, when heated with sesquichloride of iron or prussiate of potash.

In the later stages of putrefaction (on the seventh to the fourteenth day), small quantities of two poisonous bases were discovered. One of these produced in guinea-pigs and in rabbits violent peristaltic action of several days' duration, in consequence of which the animals remained for some time extremely weak and prostrate. The other poisonous base, called by the author *mydaleine*, caused in guinea-pigs and in rabbits profuse nasal and lacrymal secretion and salivation, dilatation of the pupils, and very high temperatures. The salivation gradually abated and finally ceased, the respiration and the action of the heart, both of which had been very accelerated, became normal, and recovery took place. All these toxic symptoms were more violent after an injection of about half a centigramme of mydaleine, and were accompanied with paresis of the limbs, fibrillary muscular spasms, laboured panting respiration and sinking of the temperature, which finally ushered in death. A small cat died after the injection of about five milligrammes of mydaleine.

A second series of experiments demonstrated the disintegrating influence of pathogenic bacteria on organic tissues. The culture of the typhoid-bacillus succeeded on grape-sugar and starch in the presence of nutritive salts, producing alcohol, volatile fatty acids, and lactic acid. The growth and development of this bacillus on albuminous matter takes place without evolving sulphuretted hydrogen or forming aromatic products. The author sometimes obtained during such cultures a minute quantity of a base, which in guinea-pigs produced profuse salivation, paralytic debility of the limbs, dilatation of the pupils, decrease in frequency of the action of the heart and of the respiration, and finally death, within twenty-four to forty-eight hours. The heart was found in every case in systolic contraction.

By the culture of *staphylococcus pyogenes* on broth or extract of meat, a ptomaine was obtained, which formed a hydrochloric salt, but proved otherwise indifferent. Ferd. Adalb. Junker, M.D.

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[*] *Clin. Chirurgicale*, Tome iii., p. 33.

[†] *Loc. cit.*

Article 4902.

WYSS ON NOISE IN THE EARS.

Dr. A. Wyss, of Geneva, publishes a paper on the above subject in *Der Fortschritt*, Aug. 20, 1885, No. 16. He writes:—Our knowledge of noises in the ears—or, more scientifically speaking, of subjective auditory sensations—is still very imperfect. The causes of this troublesome ailment may be manifold, and its seat is not necessarily always the auditory apparatus itself. We ought therefore to distinguish noises which are due to alterations of the auditory organ itself, or 'entotic' noises, from abnormal sounds which are produced by causes extraneous to the auditory apparatus, which may be called 'exotic' noises.

Noises in the ears present, moreover, variations in intensity and in character, which it will be desirable to know, as they may guide us in the choice of treatment. Generally, the more intense the noise, the more musical will be its character and the higher its pitch. The intensity of subjective auditory sensations is far from remaining always the same. They may be increased—*e.g.* by continued mental exertions, by the exacerbation of an attack of rhino-pharyngitis, by excesses in alcoholic liquor or tobacco, by the use of certain medicines (as quinine, salicylate of potassium, &c.), and during the menstrual period.

The distinction of continuous and intermittent noises in the ears is likewise of importance. The latter justify a far more favourable prognosis, and are generally more amenable to treatment. The author mentions a medical student who was suffering last winter from noise in the ears, in consequence of rhino-pharyngitis, but without any lesion of the auditory apparatus. The noise regularly commenced every evening in the moment of retiring to rest, and entirely ceased at the same time with the rhino-pharyngitis.

Noises in the ears may exist without the slightest degree of deafness, just as deafness is not always accompanied by subjective auditory sensations.

It is a curious fact that patients frequently complain more of the noise in the ears than of deafness, and that they speak of the former as the only cause of the latter. They do not consult the medical man on their deafness, which they consider incurable, and to which they have resigned themselves as to an infliction for which there is no redress; but they entreat him to relieve them of the noise in the ears, which has become unbearable.

It has been attempted to explain many subjective auditory sensations by the theory of increased intralabyrinthic pressure, due to the depression of the base of the stapes into the fenestra ovalis. This explanation has been generally accepted by otologists until it was lately refuted by Lucae.[*] In a great many cases in which depression of the tympanum was very marked, subjective sensations were altogether absent. Lucae succeeded in making noises in the ears momentarily cease, by positive or negative pressure in the external auditory meatus.

The treatment of noises in the ears forms one of the most difficult chapters of otiatic therapeutics. Only too frequently the medical man will be obliged to confess the impossibility of a cure, in cases in which in the outset too rash promises had been held out. Then the patients will leave, more hypochondriacal and desperate, and convinced of the incapacity of the medical man. Cautious reserve, therefore, ought to be observed in raising too great hopes in the beginning of the treatment. Moreover, pecuniary and other considerations very often frustrate regular treatment.

Passing over subjective auditory sensations caused by accumulation of wax in the meatus, which cease after the removal of the plug, the therapeutics of noises in the ears may be divided into—1, hygienic; 2, mechanical; and 3, medicinal treatment.

Hygienic treatment alone frequently suffices to free the patient from the annoyance of such noises. Giving up too noisy occupations—*e.g.* the musical profession, and temporary residence in a quiet place—*e.g.* in the valley of a mountainous district, often prove surprisingly beneficial when other kinds of treatment have failed. Other patients, on the contrary, experience a soothing effect from external noises to their subjective auditory sensations. The crackling of fire, the rushing of water, the roar of engines, the rattle of railway-carriages, may under circumstances be utilised for this purpose. To this class belong those afflicted with paracousis of Willis, which manifests itself by the peculiarity of the patients hearing conversation better when surrounded by great noises.

Lucae, in the above quoted work, recommends a novel kind of treatment of subjective auditory sensations, which he calls the 'tonal treatment' ('Tonbehandlung'). Investigating the effects of the diapason on noises in the ears, he found that high notes diminish or make to cease noises of low tonality, and that low notes have the same influence on noises of high pitch. For this purpose the handle of a tuning-fork, which previously has been brought into vibration, or better, the tapering orifice of Helmholtz's spheric resonator, is introduced into the external meatus. Still more preferable will be a magneto-electric diapason, the sounding of which may be kept up and prolonged at will. If the latter be not at hand, the same result may be obtained (according to the author's observations) by rapidly and successively introducing into the auditory canal a common tuning-fork brought into vibration by forcibly striking it, as often as it ceases sounding, against a hard object. By applying the otoscope to the other ear, the duration of the sounding of the diapason can be easily watched. Each sitting may extend several minutes, without causing the slightest inconvenience to the auditory perception. The results hereby obtained vary; frequently the benefit is only temporary, the noises in the ears returning with their former intensity ten minutes or a quarter of an hour after the application of the diapason; in other cases, the noises will cease for several hours; whilst in a small number of cases a permanent cure will have been effected. Our experience on this subject, however, is still too limited to justify a final verdict on this very ingenious method.

The *mechanical treatment* comprises: (*a*) insufflation of air by means of a catheter, or Politzer's method; (*b*) compression and decompression of the tympanum by Siégle's speculum; (*c*) massage of the Eustachian tube by means of bougies, or

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[*] *Zur Entstehung und Behandlung der subjectiven Gehoersempfindungen.* Von Dr. August Lucae. Berlin, 1884. ('On the Origin and the Treatment of Subjective Auditory Sensations.')

Urbantschitsch's method; (*d*) gymnastics of the ossicles by means of Lucae's compressive spring-probe. The first two of these methods are too well known to require further discussion.

Massage of the Eustachian tube has been tried by Urbantschitsch [*] in certain cases of subjective auditory sensations and of deafness. A bougie with a bulbous point (*bougie boutonnée*) is introduced into the Eustachian tube beyond its isthmus (the orificium tympani), and rapidly moved to and fro (from 150 to 250 times in a minute, during a sitting from half a minute to five minutes). This method, for which Urbantschitsch refrains claiming more than the value of a therapeutic experiment, likewise deserves the attention of the otologists. He principally employed it in cases of swelling of the lining mucous membrane of the Eustachian tubes; and explains its beneficial effect on subjective auditory sensations by the law of reflex action.

Gymnastics of the ossicles, by means of Lucae's compressive spring-probe, [†] are a very important therapeutic proceeding. This instrument represents in fact nothing else but a miniature railway-buffer, furnished with a pad of desiccated glue, in order to soften its contact with the parts on which it is brought to act. The terminal end of the probe, or, to keep up our simile, the buffer, is directly applied against the minute apophysis of the malleus, which constitutes the least sensitive portion of the surface of the tympanum. By gentle to-and-fro movements, oscillations will be imparted to the hammer, and consequently to the other ossicles and to the tympanum, which can easily be appreciated by the aid of strong reflected light. The results obtained by this method manifest themselves in the first place by a considerable augmentation of the auditory perceptions in cases of lesions of the apparatus of transmission, which cannot be recognised by any other means of investigation. Gymnastics of the ossicles prove, moreover, beneficial in subjective auditory sensations. Lucae mentions a case in which noises in the ears after this mode of treatment had ceased during longer than one year. The author likewise records a number of cases under his own observation, in which the subjective auditory sensations, after the use of Lucae's probe, either entirely ceased or considerably diminished.

3. The *medicinal treatment* is undoubtedly the least certain and least efficacious, but can barely be entirely dispensed with, be it only to give some moral comfort to the patient. Morphia, chloroform, ether, nitrate of amyl, bromide of potassium, and tincture of aconite, are reported to have afforded relief in a few exceptional cases.

The electric treatment of noises in the ears claims a special notice. It has been placed on a scientific base ever since Brenner's elaborate investigations.[‡] The acoustic nerve obeys the same laws of electric action as the other nerves, and produces the same subjective sensations at the cathode on suspending, and at the anode on transmitting the current. This peculiar reaction of the acoustic nerve has been utilised in the treatment of pathological subjective sensations. Brenner advises the agency of the progressive increase and diminution of the quantity of the electric current ('Ein- und Ausschleichen') by the interposition of a rheostat, bringing into action particularly the transmission and duration of the current, and applying the anode to the tragus. According to his directions, galvanic excitation ought to be avoided. Benedict,[*] on the contrary, recommends the use of the voltaic battery as 'the best method of galvanic treatment.' Others advocate the faradaic current, especially in hysterical patients (Urbantschitsch).

The relative rational selection of the method of treatment of noises in the ears, and the success to be obtained, will always depend upon the careful investigation and conscientious study of each individual case. The more accurate and precise the diagnosis, the more certain will be the chance of choosing the most efficacious treatment, and the higher the medical attendant will rise in the estimation of the patient, whose only desire is to be cured or relieved as speedily as possible.

FERD. ADALB. JUNKER, M.D.

ARTICLE 4903.

ON THE USE OF VASELINE IN ARTICLES OF FOOD.

Der Fortschritt (Nov. 5, 1885, No. 21) reproduces the following report from the *Journal d'Hygiène.*

Dr. Riche, counsellor of public hygiene and salubrity to the Département de la Seine, advised the prefect of the police to prohibit the employment of vaseline in pastry and every kind of cake. The Consulting Committee of Public Hygiene of France, applied to for approval of this measure, decided that the prohibition, instead of being issued by a prefectorial order (based on Article 99 of the law of April 1884, which imposes merely nominal fines), ought to be supported by the law of March 27, 1851, Article 1 of the law inflicting on trespassers punishments according to Article 423 of the Code pénal, 'On adulteration of alimentary substances and grocery destined for sale.'

The Minister of Commerce supported this severe ordonnance by a decree of the Cour de Cassation of March 11, 1859, worded: 'The fraudulent introduction of alimentary substances and grocery of inferior quality into articles for sale of the same kind, externally presenting the appearance of a superior quality, constitutes a fraud.'

The report of the Consulting Committee of Public Hygiene assigned the following reasons in support of its opinion: 'On the prohibition of the use of vaseline, petroleine, neutraline, and every other kind of similar products in the fabrication of cakes and of alimentary substances in general.'

'Vaseline, not being liable to turn rancid, is fraught with serious danger to the consumer, who, unwarned by the smell of the age of the cake, runs risk of purchasing pastry, the eggs used in which have already become tainted, and he only becomes aware of it when the pastry is brought under the control of the gustatory organs.'

Moreover, butter and fats constituting true aliments, the hydrocarbons of the petroleum group, viz., vaseline, petroleine, neutraline, &c., on the contrary, possess not the slightest nutritive properties; cakes in which vaseline has been substituted for butter or for other fats have not the nutritive properties of properly made pastry. Moreover, the action of substances derived from petroleum on the general economy of the body, and especially on the digestive organs, not yet having been thoroughly and exhaustively investigated, it is still an open question whether the introduction of such substances be not detrimental to health.

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[*] *Comptes-rendus du troisième Congrès International d'Otologie.* Bâle, 1885.

[†] *Archiv für Ohrenheilkunde*, vol. xxi., No. 1, 1885.

[‡] BRENNER: *Untersuchungen und Beobachtungen aus dem Gebiete der Electrotherapie.* Leipzig. 1868 and 1869. (Investigations and Observations on Electrotherapy.)

[*] *Wiener Medizinische Presse.* 1870.

It would have been better that the study of the properties of these substances had preceded this verdict on their probable unwholesomeness; but, as in the question on salicylic acid, the committee found it more convenient to pronounce *à priori*, or from mere probabilities, a proceeding altogether unscientific, and seriously compromising the true principles of sanitary science. However, vaseline not being a fat, and being entirely destitute of any nourishing properties whatsoever, this prohibition is perfectly justified for this very reason.

Vaseline is a hydrocarbon obtained by the distillation of petroleum after extraction of a certain proportion of illuminating oil from this mineral. The tar, forming the residue, is slowly evaporated in open pans, and then heated with animal charcoal for the purpose of discoloration and deodorisation. Vaseline presents an odourless and tasteless whitish jelly; it is insoluble in water, slightly soluble in alcohol, but it readily and completely dissolves in ether, essential oils, and in fats.

The uses of vaseline, as generally known, are very numerous in industries, in pharmacy, and especially in perfumery. FERD. ADALB. JUNKER, M.D.

ARTICLE 4904.

WYSS ON VARIOUS TREATMENTS OF TUBERCULOSIS OF THE LARYNX.

DR. WYSS, of Geneva, publishes in *Der Fortschritt* (Nov. 20, 1885, No. 22) a paper entitled 'Nouveaux Traitements de la Tuberculose du Larynx,' in which he discusses the various modern methods of treating this disease.

Dr. Krause, of Berlin, the author writes, communicated in July last (*Berlin. Klin. Wochensch.*, No. 29) fourteen cases of laryngeal tuberculosis treated by direct application of lactic acid, by which either cure or improvement were effectuated.

In a debate on this subject, which took place at the meeting of the Berlin Medical Society, Oct. 14, Dr. Krause adds to his former statements that those cases are the most amenable to treatment, in which the posterior wall of the larynx has not yet been affected by tuberculosis. He frequently obtained complete cicatrisation within a fortnight. The dysphagia always rapidly ceases.

Gottstein, of Breslau, and Hering, of Warsaw, likewise record good results from the use of lactic acid.

Rosenberg prefers to lactic acid a solution of 20 per cent. of menthol in oil, which he gave with signal effect.

Lublinsky observed cicatrisation of tuberculous ulcers of the larynx under the use of various applications—viz., of tannin, of boracic acid, and of the galvano-cautery.

Boecker employed lactic acid in fourteen cases; always, however, with a negative result.

Lactic acid is a colourless liquid of the consistency of syrup, soluble in water in every proportion, and readily mixing with any quantity of glycerine.

It is easily applied to the larynx by means of a brush. It causes intense pain, and sometimes violent spasm of the glottis; both of which objectionable effects may greatly be prevented by a previous swabbing with a solution of cucaine.

The lactic acid ought to be applied at least once daily during a fortnight or three weeks. Dr. Wyss has tried this remedy during one month in four cases. The larynx was at first painted with a mixture of equal parts of 50 per cent. lactic acid and of water of glycerine. In one of these patients, he soon was able to employ the pure lactic acid without any inconvenience. In one case the ulcers became rapidly clean, and complete cicatrisation took place. In the other cases, in which the lesions, especially the ulcerations in the intra-arytenoidean space were more advanced, he failed in obtaining yet any result. At the same time, Dr. Wyss records in three other cases direct cauterisation with chromic acid, whilst lactic acid, on account of its liquid state, cannot be applied otherwise than by means of a brush, by which healthy and diseased tissues are indiscriminately acted upon. The chromic acid, fixed to the end of a silver probe, can be brought into direct contact with the tuberculous ulcer, without touching the normal portion of the larynx.

The application of bromic acid is far less painful than that of lactic acid. The bromic acid, on cauterising the ulcers, forms a hard cover, which protects them against the irritating effects of the cough and of the expectoration from the diseased lungs.

In one of these three cases, an enormous swelling of the mucous membrane of the intra-arytenoid space entirely prevented the approach of the vocal cords. After an unavailing attempt by another medical man to destroy the swelling by means of the galvano-cautery, daily application of chromic acid during three weeks completely succeeded. The patient had refused the continuance of the galvano-caustic treatment, which had caused him most violent pains, notwithstanding previous swabbings with cucaine.

Dr. Wyss, from his still limited experience, believes that lactic acid is more suitable in superficial tuberculous lesions of the vocal cords, whilst chromic acid is more serviceable to act energetically on the more frequent ulcers of the posterior laryngeal wall, of the intra-arytenoid space, and of the inferior surface of the vocal cords.

Whether the cicatrisation obtained by these modes of treatment be permanent or merely temporary, remains still uncertain. No kind of treatment has yet succeeded in preventing the new growth of granulations, which form in the submucous membrane before the ulceration of the surface.

FERD. ADALB. JUNKER, M.D.

ARTICLE 4905.

RUMPF ON SYPHILITIC HEMIPLEGIA AND MONOPLEGIA.

DR. M. RUMPF writes as follows on this subject (*Deutsche Med. Wochensch.*). The progress of syphilitic paralysis in apparently identical cases differs widely. There is (1) either complete recovery after proper treatment, or (2) the disease withstands every kind of treatment. This difference is to be sought in pathological anatomical conditions. There are chiefly two ways in which the nervous system (especially the brain) is affected by syphilis

(1) Virchow's syphilitic granulation-swelling; (2) syphilitic affection of the larger vessels (Wagner and Heubner). Both forms are in the first instance pathologically and anatomically identical. The origin in both is inflammatory change in the capillaries. Both can lead to diffuse infiltration. In both, too, the new formation may assume a circumscribed character, and thus lead to actual formation of gumma. The difference lies only in subsequent changes of the new formation and the parts surrounding it. There is a tendency in a certain stage to regressive metamorphosis, when a minute vessel is affected. The quick growth of the new formation leads easily to compression of the vessel, and then follows difficulty of nutrition or its complete stoppage.

In the absence of granulation-swelling in larger vessels, the functional disturbance is compensated by the regressive formation; cicatrisation causing no disturbance. But when syphilis gains a firm hold of the vessels, the danger is greatly increased. Dr. Rumpf agrees with Koester, Baumgarten, and others that this occurs chiefly in the media which is so full of vessels, from which centre it can spread inwardly and 'outwardly. 1. Infiltration inwardly produces those disturbances which Heubner calls endarteritis. 2. Infiltration into the adventitia produces periarteritis. But in both the media is the chief source of danger. These processes again lead to two results chiefly; 1, atrophy and decline of the media, which leads sooner or later to formation of aneurysm; 2, obstruction of the vessel. The formation of gumma stops the flow of the blood; then syphilitic infiltration advances with similar results. More frequently, perhaps, infiltration advances in some parts, while in others decay takes place, followed by calcareous deposits. Then comes a slow advance of the inflammatory process, with endarteritis, formation of thrombus, or stoppage of the vessel. Then results bleeding or softening. As other causes may produce these symptoms, it is natural that ordinary antisyphilitic treatment will not suffice. This form of the disease is particularly important in certain vascular regions—*e.g.* at the base of the brain—then in those arteries which pass through the substantia perforata anterior into the region of the basal ganglia. Here, under certain conditions, hemiplegia is nearly always the result.

In contrast with these serious processes, syphilitic granulation-swelling is comparatively favourable. It mostly affects the membranes of the brain at the base, or superficially as a diffuse or circumscribed process, in the form of meningitis or gumma, and is confined to the immediate neighbourhood. If there be no large vessels there to experience irreparable disturbance, the symptoms will be confined to the parts immediately affected. As soon as these infiltrations occur in the membranes of the brain, they are of great interest. These are functional failure, paralysis of a limb, partial loss of sight, &c. According to Nothnagel, an affection of the meninges may be assumed when the paralysed limb shows signs of cramp at the same time. This characteristic of all membranous affections may be safely assumed to attach to the syphilitic too, though anatomical observations are extremely rare, while clinically comparatively frequent. Is this paralysis of the sensory sphere or only of the motor centre? Munk asserts the identity of the two regions.

Nothnagel's experiments prove that in animals sensory disturbance, particularly in the muscles, accompanies paralysis. But the results of experiments on animals are not necessarily applicable to human pathology. Consider how large, in comparison with the brain, are the lesions produced; also, that functional failure never appears in so high a degree as in man, and that soon complete compensation takes place. Very few careful observations have been made on the human subject; so that Nothnagel only hesitatingly concludes that the parts of the brain-surface whose lesion causes motor paralysis and sensory disturbance of the muscles may, indeed, lie close together, but are not identical. In a case of traumatic injury to the central convolutions, we have most carefully measured sensibility, and have found not the slightest anomaly. To decide this question, it was necessary to take in cases of syphilitic disease of the membrane. On account of the narrow limits of the question, monoplegia was adopted as the subject. Four cases are reported, important for the theory of membrane centres. In the first two there was monoplegia of a limb (arm or leg) along with membranous epilepsy.

Case 1. A man, aged 38, had been suffering for three months from monoplegia of the left arm, with intermittent clonic spasms of the arm, but never of the leg or of the other side. After the attacks, he had periods of rest, lasting for hours. He had lues in his 24th year. There was no atrophy of the arm, but increasing reflex action and muscular tension.

Case 2. A man acquired syphilis in his 24th year. Suddenly, in his 42nd year, he had epileptic fits. They were rare at first, gradually increasing in number. In his 45th year they occurred once a fortnight, ultimately twice a week. They generally began with twitching of the left leg, then of all the muscles of the body. During the attack, monoplegia of the left leg slowly came on. Reflex action was increased, and muscular tension apparent.

In both these cases sensibility was carefully watched. At first the senses of smell, taste, hearing, and sight were quite intact. The touch-test showed no diminution of feeling. Hering's æsthesiometer showed nothing anomalous. Both sides of the body were equally sensitive to electricity, temperature, and pressure. The feeling for the position and situation of the limbs showed no observable differences in the affected part. Hence it was concluded that sensibility was quite intact. There can have been then no lesion of the sensory sphere; purely motor monoplegia. Therefore the so-called motor centre is not identical with the sensory sphere. If so, can the sensory spheres be affected independently of motor centres?

Two other cases at first seemed to be ordinary membranous monoplegia.

Case 3. The patient, aged 32, had lues in his 26th year. A peculiar condition of the left arm occurred in forty-eight hours. Its action was quite free; but there was a feeling of cold and of its being 'asleep.' Then followed spasmodic attacks. There was no difference in motor power compared with the other arm. Slow and quick motions were quite easy, on the whole slower perhaps; but they were normal. The sense of touch was considerably lowered in the fingers, hand, and lower arm. The feeling of pain was quite normal. The feeling of position and of the length of the arm was uncertain. With closed eyes, the more delicate movements of the joints of the hand and arm were announced by the patient hesitatingly and often incorrectly. Slow movements were often not at all noticed by him. Reflex action was normal. The muscles were in good condition; no atrophy. The electric excitability of the nerves and muscles was normal. During examination, a sudden spasmodic attack occurred. First, there was a dragging sensation in the whole arm; suddenly a median bend of the fingers, lasting some time; then shaking of the lower arm. The attack ceased in ten or twelve hours. There was no loss of consciousness. The eyes were quite normal as to direction and size of the pupils.

Case 4. A man, aged 49, had been generally healthy till now. He had an ulcer of the penis in his 22nd year, followed by bubos and general syphilitic symptoms. Mercury had removed all the symptoms. Since then, iodide of potassium had been taken for different affections; but generally he had been able to work. His present illness began, in his 48th year, with sudden attacks in the left arm, which became insensible, had a feeling of 'pins and needles,' and abnormal sensations. Then jerking set in. No other parts were affected. Motor power was normal. The muscles worked well separately and collectively. There was less motor power in the left arm, but this was normal. Reflex action was normal. Sensibility, however, was considerably lower in the whole of the left arm. The touch-test gave the following results: finger tips, left, 0·5; right, 0·2; lower arm, left, 7·0; right, 4·0; upper arm, left, 7·8; right, 4·5. The feeling of position and situation was normal. There was uncertainty about the delicate movements of the fingers and hand. The pupils were of medium size; there was no difference between the two.

In both these cases there was monoplegia, side by side with spasmodic attacks. But they differ from Cases 1 and 2 in this, that here motor power was intact, and only sensibility was affected.

Though it is difficult to treat of the seat of a disease without pathologico-anatomical data, the analogy with purely motor monoplegia seems to point to an affection of the membrane, and it might be permissible to regard the cases as membranous disease of the sensory sphere.

Lastly, a few words on the therapeutics of these diseases. I have already said that these cases are usually favourable. I cannot state this of Case 3, for Dr. Rumpf saw it only in consultation. But the other cases, suitably treated, resulted in complete recovery and ability to work. The treatment lasted some months.

Syphilitic hemiplegia is less likely to be cured, in as far as it is caused by vascular disease. One-sided, or extensive paralysis, may be caused by diffuse syphilitic meningitis, and then there is considerable hope of a cure being effected.

John Elliott.

Article 4906.

GOLTDAMMER ON THE HYDROTHERAPEUTIC TREATMENT OF TYPHOID FEVER.

Dr. Goltdammer, physician to the Bethanien Hospital in Berlin, advocates (*Deutsche Med. Wochenschrift*) the hydrotherapeutic treatment of typhoid fever, as employed in his hospital. He asserts that the statistics of mortality are in its favour, making every allowance for their acknowledged uncertainty. An important factor in the success of his treatment is the time at which the patient is admitted. He gives these figures. In seventeen years, in 3,600 cases, the average mortality was 12·8 per cent., whilst in 450 cases admitted in the third week the percentage was 36. In the first two weeks hydrotherapeutic treatment can prevent serious nervous symptoms, and sustain strength; in the third week, bathing is positively contra-indicated In eight years, with 1,700 cases, deducting all cases admitted in the third week and those that ended fatally in the first three days, he arrived at a percentage of 9.

He alludes later on to hydrotherapeutic treatment in the army. It was first adopted in 1865, and continued in 1866. From 1849 to 1864, in the Stettin Military Hospital, there were 1,934 cases with an average death-rate of 25·9 per cent. (max. 37·2, min. 16·2). But in 1865, with hydrotherapeutic treatment, the death-rate sank to 8 per cent., and remained at 7 to 8 per cent. until 1874, with no deaths in some years. This was in the Second Army Corps. In the years 1873 and 1874 there was in the rest of the army a death-rate of 13·5 per cent., but in the Second Corps it was only 3·7 per cent. When hydrotherapeutic treatment was gradually adopted in the entire army, the death-rate, which until 1865 was 20 to 25 per cent., sank to 15, and in 1874-81 to 12, 10, 9, and 8 per cent. Whilst from 1873-81 most of the corps lost 10 to 14 per cent., and a few 8·7 to 9·1 per cent., the Second Army Corps lost in the same period only 6·4. Again, while the Prussian army in nine years (1873-82) lost 10·1 per cent annually on an average, the Austrian lost annually 26·8 per cent. from 1873-78; the Italian, from 1874-78, 16·2 per cent.; and the French (1875-80) 36·5 per cent.

After an experience of nearly 3,000 cases Dr. Goltdammer considers the treatment by means of baths the best. But he by no means asserts that it is perfect. He is willing to abandon it when something better is offered. That 'something better' is not the 'expectant' method. Under it, the death-rate in the Bethanien Hospital was 5 per cent. higher than under hydrotherapeutic treatment.

He refers to the importance of observation of individual cases. The beneficial effects of the baths on the nervous symptoms, the stimulating effect of cold baths and the spray in cases of stupor, the soothing effect of tepid baths on an excited state, the inducing of deep gentle sleep only broken by feeding, the increasing moisture of the tongue, the improved appetite, the exciting of deeper inspirations—all are to be observed. The change in serious cases in a few days, after a few baths, is generally astonishing.

The author is under the impression that the value of the antipyretic effects of the baths has been exaggerated, and that bathing is sometimes overdone. It is difficult to adjust the bathing to the individual cases. This must be the result of experience, careful consideration, skill, and tact. To this method he adheres till he finds something better; by no means the expectant method.

Dr. Goltdammer considers the medicinal treatment very important, relying in collapse chiefly on alcohol (port, sherry, or cognac), and believes in the old-fashioned musk in great weakness of the heart's action. In hæmorrhage of the bowels, little except opium is of use—the chief thing being application of ice, absolute quiet, and diet. He uses antipyretics very cautiously and only seldom, but so, advantageously. Salicylic acid he rejects as hurtful and dangerous.

John Elliott.

Article 4907.

GAFFKY ON THE ETIOLOGY OF TYPHOID FEVER.*

In 1871, Recklinghausen (*Verhandlungen der physikalisch-medicin. Gesellschaft in Würzburg*, 1871) described certain micrococcus-colonies that he had found in abscesses of the kidney in the bodies of those who had died of typhoid fever. He did not consider the micrococci to be the cause of the disease, but suggested that they pointed to the direction in which the true cause of the disease must be sought.

Since then Eberth, Klein, Browicz, Sokoloff, and Fischel have described various organisms found in the bodies of typhoid patients.

In 1881, Eberth published a fresh account of his investigations. In the mesenteric glands and spleen, the special bacilli described by him were found in 18 cases out of 40; in the remaining 22, they were not found. Similar bacilli were not to be found in the lymphatic glands or spleen of patients who had died of other infectious diseases, or of tubercular ulceration of the intestines. About the same time, Koch found similar bacilli in half the cases he examined.

During the same year Klebs also described some bacilli found in the mesenteric glands and spleen, and in the infiltrated Peyerian glands. He succeeded in cultivating them. They formed spores, and were longer than the bacilli described by Eberth, which he considered to be only a certain stage of the development of the long bacilli. Inoculation-experiments on the lower animals were not successful.

Klebs, Eberth, and Koch agree in considering the micrococci described by the earlier investigators as secondary, and not essential to the disease.

Gaffky found the bacilli described by Eberth, in 26 cases out of 28, in the mesenteric glands, or in the liver, spleen, or kidneys. The length of the bacilli is about three times the breadth, and corresponds to about one-third the diameter of a red blood-corpuscle. As to the distribution of the bacilli, Dr. Gaffky gives the following account.

In the floor of the ulcers in the intestine, so many different forms of micro-organisms are met with that it is extremely difficult to say whether the typhoid bacilli are present or not. In the infiltrated patches before the stage of disintegration and ulceration, only one form of bacillus is met with, and that in considerable numbers — viz., the typhoid bacillus of Eberth. Among the different organs, the bacilli were found most frequently in the spleen, then in the liver, kidneys, and mesenteric glands. The true frequency with which the different organs are affected, and the proportionate severity, are still undecided. The lungs were examined in several cases, and collections of bacilli, such as were readily found in other organs, could not be discovered. Scattered bacilli were found resembling the typhoid bacilli, but their identity was considered doubtful.

Gaffky has succeeded in cultivating these bacilli both on potatoes and in nutrient peptone gelatine. They possess the power of motion; and when cultivated at a temperature of 98° F. produce spores — one spore in each bacillus. At the temperature of the outside air, they produce no spores. If two bacilli be joined end to end, the spores are produced at the opposite ends. The formation of spores takes place in from three to four days, at a temperature of 30° to 40° C.; somewhat more slowly and incompletely at a temperature of 20° C., and at temperatures below that not at all. Attempts to cultivate these bacilli from the stools of typhoid patients have not as yet succeeded, because of the presence of immense numbers of other bacteria which grow more readily, and render it almost impossible to find the more slowly growing typhoid bacilli.

By inoculating sterilised tubes with the blood of typhoid patients taken during life, the typhoid bacillus was successfully cultivated, but only in small numbers.

Infection of the Lower Animals.—Schütz, professor of pathology in the veterinary school of Berlin, states that he has never met with appearances in the lower animals identical with those of typhoid fever.

In 1867, Murchison endeavoured to produce typhoid in a pig by feeding it for a lengthened period with typhoid stools, but without success.

Klein (Reports of the Medical Officer of the Privy Council and Local Government Board, London, 1875) also has fed guinea pigs, rabbits, dogs, cats, mice, and monkeys, with typhoid stools, but has not succeeded in inducing the disease.

Among many others who have repeated these experiments, Walder (*Die Typhus-Epidemie von Klolen*, Zürich, 1879) in 1879 fed calves, dogs, cats, rabbits, and fowls with typhoid stools, but with the exception of one calf they remained perfectly healthy. The calf was killed on the tenth day after suffering from diarrhœa; the Peyerian patches were swollen, but it was doubtful if the disease could be called typhoid.

Klebs has also made many experiments in the same direction, both with typhoid stools and with cultivations, but with only very doubtful success in a few instances.

Gaffky fed monkeys with cultivations of typhoid bacilli, and also injected the bacilli mixed with distilled water into their veins; not only without any evident result, but without even any rise of the body-temperature, which was taken twice a day.

Attempts were made to induce the disease in other animals—viz., calves, rabbits, guinea-pigs, rats, house-mice, field-mice, pigeons and fowls, both by feeding and also by subcutaneous injection, but without success. H. Handford, M.D.

Article 4908.

SIROTININ ON THE ACTION OF POTASSIUM SALTS ON THE HEART AND CIRCULATION.

In 1867, Professor S. P. Botkin published some observations tending to prove that potassium salts, administered in small doses, produce a beneficial action in cases of disturbed cardiac compensation (*see* his *Kürs Kliniky Vnutrennikh Boleznei*, vol. i.). Starting from these observations, Dr. V. N. Sirotinin, one of the assistants to Professor Botkin, resolved upon a clinical and physiological experimental inquiry, in order to throw some light on the action of small doses of potassium salts, and to sift contradictory statements on the matter.

One part of the author's able and interesting work (*St. Petersb. Inaug. Diss.*, 1884, pp. 106) deals with his observations carried on for two years in Professor Botkin's clinic and in the Alexandrovsky Town Barrack Hospital. He experimented mainly on cardiac patients with disturbed compensation, but tried the potassium treatment also in several cases of croupous pneumonia, renal and hepatic ascites, and pleuritic exudation. Nitrate and acetate of potassium were the salts used, the daily dose varying from ½ to 1½ drachm. On scrutinising the detailed reports of the cases, one is forced to agree with the author, that in many instances potassium salts in the said doses rendered an excellent service in the treatment of disturbed cardiac compensation, the beneficial action of the drugs sometimes ensuing very rapidly and being striking indeed. The improvement in the patient's state displays itself in—1. increase in strength of the apex-beat; 2. increase of the cardiac tones and murmurs; 3. increase of the pulse-wave and arterial tension (with diminution of the bulk of the liver, disappearance of albumen from urine, &c.); 4. increase in the daily amount of urine (with diminution of dropsy, and with a corresponding fall of the patient's weight). As to the rhythm, the pulse either remains unchanged or is retarded, the latter phenomenon occurring mainly in cases where there has been considerable acceleration of the cardiac action. The author never observed any quickening of the pulse under the treatment. All subjective symptoms, such as feeling of suffocation, palpitations, &c., usually showed a very rapid and striking improvement. In the cases of renal and hepatic ascites, as well as in those of pleuritic effusion, the diuretic action of small doses of the salts was but trifling; according to the author, this circumstance points to the fact that considerable increase in the amount of urine in cardiac cases is dependent upon the heart growing stronger under the administration of potassium. In cases of croupous pneumonia (where potassium salts were strongly recommended by Traube), the administration of nitrate of potassium both retarded and strengthened the pulse.

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* Die Aetiologie des Abdominal-Typhus. *Mittheilungen aus dem Kaiserlichen Gesundheitsamte.* Berlin. 1884.

Passing to the second part of his work, Dr. Sirotinin reviews pretty voluminous literature of the subject. [He dwells chiefly upon the works of J. Blake, Girandeau, Traube, Guttmann, Nobiling, Laborde, Kemmerich, Bunge, Schouten, Jovitzu, Aubert, and Dehn, Th. Mickwitz (*Dorpat Diss.*, 1874), T. Lambert, Boehm, G. Krosz, Hummel, Mairet, Löwit, Sydney Ringer, and Harrington Sainsbury; of the Russian authors: Levitzky, in *Meditz. Vestnik*, 1866; Podkopaëff, *ibid.*, 1865, No. 15; Sytzïanko, *ibid.*, 1865, No. 34; Jakovenko, *St. Petersb. Inaug. Diss.*, 1871; E. Petri, *Berne Inaug. Diss.*, 1880; Olga Sokolova, *Berne Inaug. Diss.*, 1881; Nikanoroff (*see* the LONDON MEDICAL RECORD, December, 1884, p. 522); Malinovsky, *St. Petersb. Inaug. Diss.*, 1882.] The author's physiological experiments concerned also mainly small doses of potassium salts, and consisted of hypodermic injections in frogs, and of intravenous in dogs. In the latter, the salts were injected always into the femoral veins, the concentration of the solutions usually varying from 5 to 10 per cent., the dose injected at a time from 2 to 5 cubic centimètres. In one series of the experiments the animals were previously curarised, in another, morphinised, and in a third left unpoisoned. Nitrate, sulphate, carbonate, and oxalate of potassium, bromide and iodide of potassium, and double tartrate of potassium and sodium, were the salts studied.

The outcome of these numerous experiments performed under most varying conditions (including excitations of Pavloff's cardiac accelerating and strengthening fibres situated in the vagus) is this. 1. Potassium salts, in non-toxic intravenous doses, produce an increase of the arterial tension and retardation of cardiac contractions (as stated also by Traube, Levitzky, Podkopaëff, Aubert and Dehn, Mickwitz, and Hummel; while Jakovenko, Kemmerich, and Schouten observed an acceleration of the pulse). 2. The retardation is dependent upon excitation of the vagus centre. 3. A slight and fleeting initial acceleration, as well as the acceleration which is observed in the stage of decrease of arterial tension, and a considerable acceleration after removal of the influence of the inhibitory apparatus are, probably, dependent on the irritation of the cardiac motor ganglia. 4. The rise of the blood-pressure depends upon constriction of the vessels in consequence of stimulation of their peripheral nervo-motor apparatus, as well as upon an increase in energy of cardiac contractions. 5. There are no grounds for admitting any cumulative action of potassium salts. [Thus, the author is opposed to Guttmann; he even goes so far as to endorse the opinion of Aubert and Dehn, according to which there is developed a distinct tolerance to the salts.] 6. Large doses bring about either temporary enfeeblement of the cardiac action, or ultimate stoppage of the heart in consequence of paralysis of its nervo-motor apparatus (as Mickwitz, Olga Sokolova, Petri, Löwit, and Krosz also think). In the former case, the heart recovers either spontaneously or under mechanical stimulation, or under the stimulation of the cervical vagus, or of the accelerating branch of the latter. 7. As to the clinical use of potassium salts, aiming to increase the cardiac action and blood pressure, it is most rational to administer small often repeated doses, the size of which must be yet established by clinical experience. As a general proposition, supported by physiological and clinical experiments, Dr. Sirotinin states that any fear of weakening the cardiac action by the therapeutic use of small doses of potassium salts has no ground whatever (a statement which is diametrically opposite to that of Professor Sydney Ringer and Dr. Harrington Sainsbury). Like Sytzïanko, the author points out that intravenous injection of even such large doses as one gramme per kilogramme of the dog's weight does not involve any palpable harm to the cardiac action, provided that the salt be introduced in a very dilute solution, and only by small portions at a time (not more than 0·005 per kilogramme every minute, whilst an injection of 0·033 per kilogramme at a time produces fatal stoppage of the heart). 'Everything depends upon the concentration of the solution introduced, and upon the rapidity of the injection,' the author says. The cause for so wide an amplitude for fatal doses he seeks in a rapid elimination of potassium salts from the animal system.

V. IDELSON, M.D.

ARTICLE 4909.

TCHUNIKHIN ON HYDROBROMATE OF ETHYL IN OBSTETRIC PRACTICE.

IN the *Vratch*, No. 30, 1885, p. 491, Dr. P. N. Tchunikhin, of Professor J. P. Lazarevitch's clinic in Kharkov, describes his experience of hydrobromate of ethyl as an anæsthetic in labour. The drug was employed by him in nine cases of normal and in one of instrumental (forceps) labour. All the patients were young (from 19 to 25 years of age) and well nourished, nine of them being primiparæ, one secundipara. The administration of the drug lasted from fifteen minutes to one hour; the whole amount of the hydrobromate used in an individual case varying from one ounce to two ounces and five drachms (or from 7½ to 48 grains a minute). In some of the experiments a chemically pure drug, prepared by Dr. Slonevsky, was given; in others a preparation from Gehe & Co., purified by distillation; and again, in others, an almost pure article from a local firm. The conclusions drawn from these observations are these:

1. Commercial specimens of hydrobromate of ethyl are of varying properties and value.

2. The chemically pure hydrobromate has an unpleasant odour.

3. Its administration in the doses stated above presents no danger either for the mother or for the fœtus.

4. It does not produce nausea, vomiting, or excitement, the patient remaining conscious.

5. In the majority of the cases there were present flushing of the face and mydriasis.

6. Being administered to the parturient, it enters also in the blood of the fœtus; it is eliminated from their systems within a period varying from one to thirty-six hours (as far as it is possible to judge from the odour of the breath).

7. In doses of from 7½ to 48 grains a minute, administered continuously for half to one hour, hydrobromate of ethyl does not produce complete anæsthesia. [The same was stated lately by Dr. Ekaterina M. Jdanova, of St. Petersburg, in the *Meditz. Vestnik*, 1884, No. 6.]

8. As a pain-stilling means in normal labour, it acts but feebly and inconstantly. [In the *Berlin. Klin. Wochensch.*, 1883, No. 44, Professor Peter Müller, of Berne, also stated that hydrobromate of ethyl proved effective only in about 50 per cent. of his cases.]

9. It acts far better when it is given on forcible and deep breathing.

10 In the majority of cases the strength of uterine contractions, as well as the duration of the latter, are increased, while intervals between the contractions are shortened (under the condition that the administration of the hydrobromate is not very prolonged).

11. When administered in the way stated, the drug does not retard the process of labour.

12. The pure drug does not give rise to any untoward accessory effects, either during parturition or in the puerperium. It does not influence the health of the infant in any way. V. IDELSON, M.D.

ARTICLE 4910.

RABINOVITCH ON THE ACTION OF SALT BATHS IN FEBRILE PATIENTS.[*]

TO study the parallel action of salt and sweet-water baths on the temperature, pulse, respiration, and muscular strength in febrile patients, Dr. M. F. Rabinovitch (*St. Petersburg Inaugural Dissertation*, 1885, p. 44) carried out a series of experiments on fifteen patients, in the Nikolaevsky Military Hospital, suffering from uncomplicated enteric fever. In all, eighty-two parallel baths—forty-one of salt water and forty-one of sweet water—were used. The temperature of the baths varied between 18° and 27° Reaum. (72°·3 and 90°·75 Fahr.), being mostly 20° Reaum. (77° Fahr.); the duration was from ten to twenty minutes; the concentration of the salt solution used, from 1½ to 4 per cent. A 1 per cent. salt bath of twenty-two pailfuls of water required 6½ pounds of chloride of sodium. The parallel baths were made in a given case in such a manner that one day the patient took a salt bath in the morning and evening, and on the next day a sweet-water bath under all possibly identical conditions. During the bath the patient was energetically rubbed with hands by two men. The author arrived at the following results.

1. Salt-water baths lower the temperature (both the rectal and the axillary) in febrile patients somewhat more energetically than sweet-water baths, the average surplus being about 0°·40 C. [Dr. Makavëeff, in his *St. Petersburg Inaugural Dissertation*, 1881, 'On the Action of different Mineral Baths in Staraia Russa,' says that, from salt baths at 26° or 27° Reaum., he has obtained the same effects as were observed by Winternitz from cold baths with shampooing. In the *Meditz. Vestnik*, No. 28, 1884, Dr. V. N. Kossovsky, who studied the effects of bathing in Repnoë Ozero, a lake containing about 10 parts of chloride of sodium in 1,000, seemed also to think that salt water impresses the bodily temperature more energetically than common water.]

2. The difference remains marked for about three hours after the bath. The fall of temperature after evening baths (both of common and salt water) is more considerable than after morning baths.

3. Salt baths retard the pulse slightly more (from 2 to 6 beats a minute) than common ones. [In the *Voenno-Sanitarnoë Delo*, 1883, Dr. Buch, who studied the action of Staraia Russa waters, also, states that after salt baths at 25° R. the pulse is retarded about 2 to 10 beats a minute. Makavëeff (*loc. cit.*) also saw a retardation of the pulse after salt baths at 27° R.] After salt baths, the pulse is tenser and fuller than after sweet-water ones.

4. Respiration is, similarly, more retarded by salt baths than by common ones, the retardation continuing for three hours. At the same time, after salt baths both inspiration and expiration become deeper and more prolonged than after common baths.

5. Salt baths increase muscular strength (as measured by Colin's dynamometer) somewhat more than common ones, the average difference being about 1·1 kilogramme.

6. They act more refreshingly on the patient than sweet-water baths; the patient feels more cheerful and more comfortable.

7. Taking all in all, the difference between common and salt baths is not so considerable as to impress, in any special way, the functional action of the heart and lungs. [Meanwhile, Drs. Bertenson and Voronikhin (*see* their work on 'Mineral Baths, Mud-Baths, and Sea-Bathing in Russia and Abroad,' 1884), as well as Dr. O. Motchutkovsky (*see* his 'Contribution to the Study of Therapeutic Action of Odessa Limans,' 1876) think that salt water acts differently on the system than sweet water.]

8. Still, as a hydrotherapeutic agent in the treatment of febrile diseases in children, salt baths deserve preference before common ones.

V. IDELSON, M.D.

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[*] RABINOVITCH, M. F.—A Contribution to the Study of Salt Baths in Febrile Patients (*St. Petersburg Inaugural Dissertation*, 1885, p. 44). A Preliminary Note on Ditto (*Vratch*, 1885, No. 8, p. 115).

SURGERY.

RECENT PAPERS.

4911. Pousson.—Rupture of the Bladder. (*Revue de Chirurgie*, Nov. 1885.)

4912. Braun.—External Urethrotomy in the Treatment of Retention from Enlarged Prostate. (*Centralbl. für Chirurgie*, No. 46.)

4913. Cowell.—Causes of Failure in Excision of the Hip. (*Westminster Hospital Reports*, Vol. i.)

4914. Lauenstein.—Fracture of the Olecranon. (*Centralbl. für Chirurgie*, No. 33, 1885.)

4915. Delbastaille.—Subnitrate of Bismuth as a Dressing. (*Annales de la Société Méd.-Chir. de Liège*, Oct.)

4916. Landerer.—Local Anæsthesia by Subcutaneous Injections of Cucaine.

4917. Tchudnovsky, J. B.—On a Case of Extensive Scald. (*Proceedings of the Viatka Medical Society*, Nos. 10, 11, and 12, 1885, pp. 12–16.)

4918. Bertels.—On Artificial Anæsthesia after Modified Neudorfer's Method. (*Vratch*, No. 48, 1884, p. 816.)

4919. Lucas.—Separation of the Epiphysis of the Metacarpal Bone of the Thumb. (*Lancet*, Oct., p. 801.)

4920. Jennings.—The Value of Cucaine for Allaying Pain in the Destruction of Cancerous Growths by Caustics. (*Lancet*, Oct. p. 663.)

4921. Gosselin.—Bismuth as a Dressing for Wounds. (*Lancet*, Oct., p. 634.)

Art. 4911. *Pousson on Rupture of the Bladder.*—The *Revue de Chirurgie* for November contains an original memoir of some interest by Dr. A. Pousson, of Paris, on the pathogeny of two little known varieties of rupture of the bladder, and on the means of preventing such forms of this lesion. An endeavour is made here to prove that, in addition to cases of traumatic rupture and cases of spontaneous rupture—the walls of the bladder in this latter class being invariably diseased—there are, firstly, instances in which the healthy viscus distended by urine bursts under the influence of contractions of the abdominal wall during some violent voluntary or involuntary movement; and, secondly, cases in which the bladder, having undergone a morbid change, increasing rather than diminishing the resistance of its walls, may rupture through its own contraction. A bladder with hypertrophied wall may, it is argued, be ruptured by the action of its intrinsic muscles in retention through urethral stricture, and also through vigorous and irregular spasmodic contraction of these muscles, excited by the contact of fluid injected, even in small quantity, into the vesical cavity. Four recent cases are reported by the author, in which the hypertrophied and irritable bladder was ruptured during the injection of fluid, as a preliminary, in three of the instances, to lithotomy, and, in the fourth, to simple cystotomy. Dr. Pousson proposes the following classification of ruptures of the bladder, which will, he thinks, include every possible form, and remove all uncertainty on the etiological interpretation of any given case. He would divide these injuries into ruptures of the healthy bladder, and those of the diseased bladder (pathological ruptures). Under the former are included traumatic ruptures by direct and by indirect causes, and ruptures by effort. The latter or pathological class include ruptures by perforation, and ruptures by muscular contraction of the vesical walls. The following practical teaching is derived by Dr. Pousson from these considerations. In the majority of cases of rupture of the bladder by the contraction of the abdominal muscles, the injury is produced during the administration of an anæsthetic. It is advisable, therefore, before giving chloroform or ether to empty the bladder. In most instances hitherto recorded of this kind of vesical rupture, the patient was suffering from very tight stricture of the urethra. In such cases, it will be advisable to remove the urine by puncture. It is held that in future a prudent surgeon, before giving an anæsthetic to any patient on whom it is proposed to perform, for example, external urethrotomy for organic stricture or rupture of the urethra, ought always (if the bladder be much distended) to perform hypogastric puncture in order to avoid any risk of rupture of this viscus by contraction of the abdominal muscles. The demonstration of the possibility of rupture of the bladder by the action of its intrinsic muscles, indicates the dangers of practising forcible injections for the purpose of re-establishing the capacity and tolerance of small and irritable bladders. It is especially in cases requiring lithotrity and suprapubic lithotomy that vesical hypertrophy and irritability are most liable to be met with. The administration of chloroform in large doses is the sole means, Dr. Pousson states, of abolishing the contractions of a bladder, whether healthy or diseased, excited by the injection of fluid. It is held necessary, therefore, that in every case of painful and irritable bladder in which it is found necessary to practise injection, the influence of the anæsthetic should be carried as far as possible in order to prevent any vesical reaction from being caused by distension.

4912. *Braun on External Urethrotomy in the Treatment of Retention from Enlarged Prostate.*—In the *Centralbl. für Chirurg.*, 1885, No. 46, Professor Braun, of Jena, advocates external urethrotomy for the relief of retention of urine due to prostatic disease associated with false passages, when it is found impossible to introduce a catheter by the usual way into the bladder. Forcible catheterism is an uncertain and dangerous method, and to capillary puncture and aspiration above the pubes it is objected that such treatment is troublesome to the patient and painful, that it has to be frequently repeated, that it does not allow necessary injections into the bladder in cases of strongly alkaline urine, and, finally, that it is not free from risk. The danger consists, not in direct injury to the peritoneum, but in the risk of inflammation of the connective tissue near the bladder from the penetration of decomposed urine into the punctured wound, and of extension of this inflammatory action to the peritoneum. The same objections apply to the method of puncture and retention of the cannula. External urethrotomy allows a constant and free discharge of urine through a retained catheter of full size, and also thorough and repeated cleansing of the bladder by injections, which would diminish or possibly dispel altogether the infective properties of the urine. Such treatment will also enable the surgeon, in the not uncommon case of a complication of prostatic hypertrophy with vesical calculus, to discover and remove the latter. In dealing with the objection to external urethrotomy as being too severe an operation in comparison with suprapubic puncture, Braun points out that the existence of false passages passing through the prostate into the cellular tissue between the bladder and rectum, or into the cavity of the bladder, may cause suppuration and pyæmia, and therefore indicates prompt and effectual treatment, favouring an uninterrupted flow of urine, and a ready discharge of any collection of pus.

4913. *Cowell on Causes of Failure in Excision of the Hip.*—Mr. George Cowell, whilst firmly convinced that life and limb may be most satisfactorily saved in advanced hip-joint disease by timely excision, acknowledges that there are great difficulties and disappointments inseparable from the operation, and has been led to place on record in the first volume of the *Westminster Hospital Reports* what he believes to be the chief causes of these failures. The observations in this article are restricted to cases of disease. One great cause of failure, it is held, is undue postponement of the operation, great deformity and permanent sinuses, in no slight proportion of cases, occurring after excision performed when the proper time for such treatment had been allowed to pass by. Another exceedingly important point in reference to the operation is the age of the patient. The younger the patient, Mr. Cowell states, the better the result of the excision. The operation he has long discarded in adults, and, having formerly fixed the age above which it was inadmissible at 18, is now inclined to put it at 16, or even 14. In his cases the completeness of the repair was greatest when the operation had been performed between the ages of 3 and 6. In these children the lameness was exceedingly slight, the inequality of the length of the limbs being practically almost obliterated by a slight compensatory obliquity of the pelvis. This completeness, Mr. Cowell asserts, is not realised at later ages, and, in patients from 14 to 18 years of age, few of the limbs become in any way useful, there being always considerable shortening and muscular atrophy and often no attempt at the formation of new material between the bones. In order to obtain a favourable result from excision of the hip, it is held necessary to sacrifice the great trochanter with the head of the femur, and also to remove carefully and completely all diseased or necrosed portions of bone from the acetabulum, and to scrape away all granulation-tissue that may have formed in and around the joint during the suppurative process. The main object of Mr. Cowell's paper is to direct attention to three frequent sources of failure of excision of the hip, arising from neglect during their after-treatment. It is held to be of the first importance to avoid early contraction of the external wound, and consequent interference with drainage. Eversion of the limb is asserted to be a frequent cause of diminished usefulness of the limb after excision. It is often forgotten that the most critical time for securing for the limb a good position is just when the patient has apparently made sufficient advance in the reparative process to permit of the removal of the splint. It is held also that in a large number of cases of excision of the hip, extension is relaxed too soon. That undue deformity may be avoided, and a thoroughly useful limb obtained, it is absolutely essential, Mr. Cowell states, that extension should be kept up until consolidation of the new bone has been completed. In conclusion, Mr. Cowell insists on the importance of plenty of fresh air, and sea-air if possible, in the after-treatment of excision of the hip. Some cases fail to do well, because they are kept too long in hospital. In the summer months there need be little difficulty in getting young patients out of doors, by using, in the early stage, Bryant's splint, and, at a later stage, Sayre's splint, carefully applied to maintain extension.

4914. *Lauenstein on Fracture of the Olecranon.*—In an original article on the prognosis and treatment of simple transverse fracture of the olecranon (*Centralbl. für Chirurgie*, No. 33, 1885), Dr. Carl Lauenstein, of Hamburg, states that, in the opinion of all surgical authorities, union after this injury very rarely takes place by bone, but usually by fibrous bands which, according to their length, interfere more or less with the full use of the upper limb. Hueter and Lossen hold that the chief cause of this failure of osseous union is the defective production of callus by the periosteum of the olecranon, which consists mainly of the non-vascular insertion of the tendon of the triceps. According to Bardeleben, on the other hand, the formation of callus is prevented simply by separation during treatment of the two broken surfaces of bone. Lauenstein agrees in the latter view, and asks why, if the periosteum of the olecranon is capable of producing callus in longitudinal fracture, it cannot do so when the fracture is transverse. He holds that the prognosis of transverse fracture of the olecranon, and the probability of union merely by fibrous tissue, depend less on the special nature of the fracture than on inefficiency of such plan of treatment as is usually employed. A treatment is advocated, which is analogous to that of Volkmann in dealing with simple transverse fracture of the patella. The extra-articular collection of effused blood is first withdrawn by puncture, and the fragments are then brought into close apposition. The three essential points in the treatment of transverse fracture of the olecranon are, it is stated, early removal of effused blood from the joint, prevention of separation of the fragments, and prevention of subsequent ankylosis of the elbow. Such indications are not fulfilled by the ordinary plan of treatment. It is clear that where, after an interval of from eight to fourteen days, the effusion of blood has been removed or much diminished by rest, elevation of the limb, cold applications, compression, &c., the chances of obtaining osseous union of the fragments have been lost. The triceps muscle, deprived, through fracture of the olecranon, of its insertion, acts like any other muscle divided either by injury or in tenotomy, and undergoes more or less contraction. When the effused blood is left to be removed by absorption, the risks of ankylosis of the elbow are considerably increased. In most handbooks, the surgeon is advised to commence passive movement of the elbow about three weeks after the date of injury, an interval which is not sufficient for the attainment of complete osseous union of the fragments. Simple extension of the forearm and forcing of the limb in this position do not suffice to keep the fragments in contact. The author, after early removal of the effused blood, maintains the olecranon in contact with the ulna by applying strips of plaster wound diagonally around the arm, in order to avoid too much constriction. Extension of the forearm is kept up for five or six weeks, until complete bony union has been established.

4915. *Delbastaille on Subnitrate of Bismuth as a Dressing.*—In the *Annales de la Société Médico-Chirurgicale de Liège*, Oct. 1885, is a review by Dr. Delbastaille of recent communications on the surgical uses of subnitrate of bismuth, and its chemical and physiological action when applied to open surfaces. Kocher was one of the first to demonstrate the antiseptic action of this salt, and to describe its advantages as a dressing. According to this surgeon, bismuth has a desiccating and astringent action on the surface of a recent wound, and, as an antiseptic, does not affect directly the infective germs, but acts on the medium of culture, which it renders unfitted for the development of micro-organisms. Riedel, on the other hand, attributes the antiseptic action of bismuth to a constant elimination of small quantities of nitric acid, resulting from the decomposition of the salt, through contact with the secretion of the wound. According to Gosselin and Héret, in a recent communication to the Academy of Sciences of Paris, on the mode of action of subnitrate of bismuth in the dressing of wounds, this salt exercises indirectly through nascent nitric acid a coagulating action, and, at the same time, through this acid and oxide of bismuth, an astringent action, whilst the unaltered salt acts both as a germicide and a sedative. From these results Dr. Delbastaille concludes that subnitrate of bismuth is not likely to have any extended practical application. The necessity experienced by the surgeon of having concurrent resource to other antiseptics for the disinfection of instruments, &c., the uncertainty of the germicide action of the salt, and, finally, the toxic effects which it may excite (stomatitis, intestinal catarrh, nephritis), prove the inferiority of this dressing, as compared with those dressings which establish antisepsis by soluble and volatile products.

4916. *Landerer on Local Anæsthesia by Subcutaneous Injections of Cucaine.*—Dr. A. Landerer, of Leipzig, has recently made trial of subcutaneous injections of cucaine for producing local anæsthesia, and reports that the agent thus administered acts far better than anæsthetic ether, morphine, or any other means hitherto used with this object. The mode of administration is very simple. By means of an ordinary morphine syringe about fifteen minims of a 4 per cent. solution are injected under the skin. Anæsthesia is usually established at the end of five minutes. If the patient after this interval still feel when the surface is scratched with a knife, the author waits one or two minutes longer. The anæsthetic region is of about the size of a crown-piece. A dissection, it is stated, may in this region be carried down below the fascia, and into the superficial layer of muscle, without causing any pain. The influence of the cucaine is maintained for about half-an-hour. If it be necessary to prolong the anæsthesia, a few drops of the solution may be applied to the wound, and allowed to remain until it is absorbed. The subsequent healing of the wound is not in any way affected by the injection. No unpleasant general after-effects have ever been observed by Dr. Landerer, nor any local mischief, such as suppuration. Injection of cucaine has been applied in cases of simple incision, of needle-extraction, and of removal of small tumours. It has been applied also in a case of hydrocele. Fifteen minims of a 4 per cent. solution were first injected into the sac, and five minutes later, through the same canula, about a drachm and a half of a solution of iodine. The latter injection did not cause any pain. About six hours after the operation the patient complained of slight and very transient uneasiness. Cucaine injection as a means of producing local anæsthesia is far preferable, Dr. Landerer asserts, to the ether spray. The cucaine solution, when introduced through a fine and sharp needle, does not cause so much pain as the ether does, whilst freezing the skin. The anæsthetic influence of the ether-spray does not extend below the skin. After injection of cucaine, on the other hand, the parts immediately below the skin are quite free from pain and sensation. W. Johnson Smith.

4917. *Tchudnovsky on an Extensive Scald.*—Dr. J. B. Tchudnovsky, of Viatka, furnishes details of an interesting case (*Proceedings of the Viatka Medical Society*, Nos. 10, 11, and 12, 1885, p. 12) of a badly nourished but otherwise healthy soldier, aged 21, of moderate habits, who, while in *Cania* (Russian bath) was severely scalded by steam, nearly one-third of the whole surface of his body (including the face, chest, abdomen, penis, &c.) being covered with large blisters. On the fourth day after the accident there appeared rigors, high fever (41°C.), small rapid pulse, still delirium, and involuntary micturition. Suppuration was very profuse. For two weeks the patient's state remained much the same; but, contrary to the author's expectation, from the fifteenth day a gradual and steady improvement commenced, and, under 'open' treatment of the injuries, and under the use of frequent baths, in another two and a half weeks the patient felt so far strong as to be allowed to get up. On the same evening, however, he began to complain of severe frontal and temporal headache, and on the next day there appeared deep cyanosis of the limbs, a wild, wandering expression of the face, spasmodic muscular twitchings, general tremor, and tottering gait; in the course of the subsequent days there were added progressive failure of memory, apathy, incoherent talking, delirium of persecution, the patient being seized with extreme terror on slightest rustling or noise, &c. He suffered also from frequent cardiac palpitation, with distinct intermittency of the beats. Meanwhile, the scalds healed everywhere without leaving any deforming scars. During the next months all the nervous symptoms markedly grew worse, and finally the patient was taken from the hospital by his relatives. Dr. Krassovski points to the rarity of recovery after such extensive scalds, and of the development of severe consecutive nervous symptoms.

4918. *Bertels on Anæsthesia by Chloroform and Oxygen.*—At a meeting of the St. Petersburg Medical Society, Dr. Bertels (*Vratch*, No. 48, 1884, p. 816) made a communication on artificial anæsthesia after Neudörfer's method somewhat modified by himself. Anæsthesia by means of a mixture of chloroform with oxygen requires far less quantities of chloroform comparatively with the usual methods of its administration, and is, correspondingly, associated with lesser danger. Moreover, perfect anæsthesia ensues far more easily, and may be obtained even in those patients in whom chloroform alone has failed. When the quantity of chloroform in the mixture does not exceed 10 per cent., no sickness is observed. The pulse remains unchanged; the tongue never falls back. To ensure complete narcosis, it is essential to firmly adjust the mask to the patient's face. Professors A. J. Krassowski and V. V. Sutugin have also obtained good results from the use of a mixture of chloroform with oxygen.

V. Idelson, M.D.

4919. *Lucas on Separation of the Epiphysis of the Metacarpal Bone of the Thumb.*—Mr. R. Clement Lucas records in the *Lancet*, October 1885, p. 801, a very rare accident of separation of the epiphysis, simulating dislocation of the carpo-metacarpal joint of the thumb. Chloroform was administered to the patient—a lad, aged 16—to ratify the diagnosis. A well-padded splint kept the parts in position, and a complete recovery took place in three weeks. [Since the *Medical Digest* was published, *vide* sect. 94 : 5, much has been written in addition to the cases there reported of the separation of various epiphyses, and the mistaken diagnosis often made. *Vide* Godlee, *Lancet*, January 1884, p. 60 ; Wheelhouse and Treves, *Brit. Med. Jour.*, February 1885, pp. 475–78 ; Hutchinson, *Med. Press and Circular*, March 1884, p. 246.—*Rep.*]

4920. *Jennings on the Value of Cucaine for Allaying Pain in the Destruction of Cancerous Growths.*—In the *Lancet*, Oct. 1885, p. 663, Mr. C. E. Jennings records two cases in which he used cucaine to alleviate pain, whilst caustics were applied to cancerous growths. One patient was aged 73, and suffered from extensive scirrhous ulceration of the right breast. The surface of the ulcer was covered with rugged irregular granulations which bled upon pressure ; the veins around the growth were much engorged, and the pain was increasing. After painting the ulcerated surface with a ten per cent. solution of hydrochlorate of cucaine, a paste was applied consisting of cucaine, potassa fusa, and vaseline. After some minutes a burning sensation was experienced ; then the paste was quickly removed with the charred tissue, by means of pledgets of cotton-wool previously moistened with water. The denuded surface was again painted with cucaine solution, and the compound paste reapplied. By this means, more than a tablespoonful of cancerous growth was removed by a rapid and painless process. The next day a clean, smooth, and bloodless surface, insensitive to the touch, was presented. By this means, most of the scirrhous mass was removed after a few applications. In the second case, the author destroyed a cancerous growth of the os and cervix uteri, by means of sticks of potassa fusa, and a ten per cent. solution of cucaine.

4921. *Gosselin on Bismuth as a Dressing for Wounds.*—In the *Lancet*, Oct. 1885, p. 634, an article refers to the method of dressing wounds with bismuth, advocated by MM. Gosselin and Héret. These observers have dressed artificial wounds and amputations with subnitrate of bismuth and have noticed the absence of bleeding. As an antiseptic, the subnitrate has the property of moderating inflammation and of imparting to the wound what M. Gosselin calls 'frigidity.' The hydrate of bismuth cannot replace the subnitrate, as it is wanting in the coagulating and constricting action of the latter. RICHARD NEALE, M.D.

MEDICINE.

RECENT PAPERS.

4922. FOTHERGILL.—A Presumptive Diagnosis of Gout. (*Lancet*, Nov., p. 846.)

4923. MURRAY.—A Case of Long-standing Renal Calculus in both Kidneys. (*Lancet*, October, p. 614.)

4924. HADDEN.—The Symptoms and Treatment of Chronic Alcoholism. (*Lancet*, October, pp. 610, 661.)

4925. ENGEL.—The Etiology of Displaced Spleen. (*Orvos Természettudományi Ertesitö*, 1885 ; and *Deutsche Medizinal-Zeitung*, Nov. 5, 1885.)

4926. KOSTYLEFF, B.—On a Case of Hydrophobia. (*Meditz. Oboz.*, Fasc. 24, 1884, pp. 1077–79.)

ART. 4922. *Fothergill on a Presumptive Diagnosis of Gout.*—Dr. Milner Fothergill, in the *Lancet*, Nov. 1885, p. 846, contributes a very suggestive paper read *in extenso* before the Medical Society of London. To the question 'What is Gout?' he replies :—'Gout is hepatic reversion, the formation of a quantity of primitive urine products by a mammalian liver.' Laycock's magnificent word-portraits of gout are reproduced, and also Sir Charles Scudamore's. Dr. Fothergill dwells upon two characteristic points, the teeth and nails. The teeth are solid, blunt, thick at the edges, and worn down. They have a great tendency to come out, not being carious. The nails are apt to become hard, brittle, and striated. This very suggestive paper thus concludes :—'Are we in a position to say that any person has gout, when complaining of maladies experience has taught us are frequently the outcome of gout? Is there any sufficient evidence for a committal? Can we from the build, the contour, the ears, the teeth, the nails, *plus* a certain irritability at times felt by the individual, say that gout is underlying the phenomena complained of? I hold that very often it is possible to say that a person is gouty, or, in other words, the subject of hepatic reversion, despite the absence of any articular evidence thereof.'

4923. *Murray on a Case of Long-standing Renal Calculi in Both Kidneys.*—In the *Lancet*, Oct. 1885, p. 614, Dr. Murray records a most interesting case of renal calculi, in which there was almost complete absence of local subjective symptoms. The patient was a lady, aged 57, who had always ailed more or less during her life, being easily fatigued on exertion, and often suffered from hysteria, dyspepsia, neuralgia, &c. When Dr. Murray first saw her, in February 1885, she was suffering from what she described as 'fever and diarrhœa.' The pulse was rapid and thin, the tongue furred, but the temperature was normal. In the left lumbar region there was a marked area of dulness, extending backwards from the left of the umbilicus to the left ilio-lumbar space, evidently renal. The urine contained one-fifth of albumen, with casts and pus-cells. The case was diagnosed as one of hydronephrosis. The patient gradually sank, no operation being deemed advisable, and she died about the middle of May. On *post mortem* examination, the left kidney was found enormously enlarged, being 8 inches long and 2½ inches broad. The pelvis of the kidney was dilated, and contained two large calculi ; one weighed nearly 3 drachms, and was of a peculiar shape, like a boot ; the other about 1½ drachms. The right kidney was also considerably enlarged, and contained two calculi in its pelvis. All these calculi were composed of oxalate of lime, and were very rough. On cutting into the kidneys, these were found to be sacculated throughout, and were simply bags of pus ; very little of the gland-structure remained. This patient during her life never complained of lumbar pains, but only of what she termed 'neuralgia over the abdomen,' which was relieved if she vomited or eructated. She was able to follow her daily routine in life until three months before her death.

4924. *Hadden on the Symptoms and Treatment of Chronic Alcoholism.* — In the *Lancet*, Oct. 1885, pp. 610 and 661, Dr. Hadden contributes some cases illustrating the symptoms and treatment of chronic alcoholism as it affects the nervous system. The first case was that of a married woman, aged 32, who had drunk much brandy for three years. Eight months before she came under the author's notice, she began to have pains in the feet, shooting up the front of the leg. Six months later, she commenced to vomit in the morning. On admission, under Dr. Hadden, there was hyperæsthesia of both feet, but no rigidity or wasting of muscles. She could walk fairly, but was inclined to fall on turning. She could stand with her eyes closed. The patellar tendon-reflexes were absent, the plantar reflexes present. There was no bladder or rectal trouble; the pupils and optic discs were normal. The temperature was 101° F. No special treatment was given, and in a fortnight she left the hospital quite well. Several other cases are recorded, many of them presenting very peculiar symptoms. As to the treatment of these cases, the author remarks that the first thing to be done is to withdraw all alcohol entirely, and future abstinence must be enforced; no medium course is any good. As regards drugs, no special medicine is of much use, beyond bromide of potassium and chloral-hydrate, for allaying mental excitement. The constant current is the only reliable agent in treating the paralysis. Its use may be required for months. Nothing appears at first sight more hopeless than these cases, yet by patient use of the constant current nothing is more cheering than the result.

RICHARD NEALE, M.D.

4925. *Engel on Displaced Spleen, Ague-cake, and Pregnancy.*—Dr. Gabriel Engel, of Klausenburg, Transylvania, has observed three cases of enlarged and movable spleen, two occurring during pregnancy, with which the disease in no way interfered; quinine rapidly reduced the enlargement. In the third case, a woman had not seen a monthly period for sixteen months, and had firmly believed that she was pregnant. She had been attacked with pains resembling those of labour, and presented general symptoms of paludal cachexia. A large soft tumour filled the lower part of the abdomen, extending into the pelvis. Under a course of quinine the patient rapidly improved, and the swelling diminished. Dr. Engel recommends, should more active treatment be required than quinine and an abdominal belt, extirpation of the spleen in preference to torsion of the splenic artery, by manipulation of the enlarged organ through the abdominal walls. [It is evident that displacements of the spleen, or, at least, such cases as Dr. Engel describes, as occurring in a marshy country, are in no way homologous to 'movable liver' and floating kidney,' which Landau has recently shown to be allied to hernia.—*Rep.*]

ALBAN DORAN.

4926. *Kostyleff on a Case of Hydrophobia treated by Oxygen Inhalations.*—In the *Meditz. Oboz.*, Fasc. 24, 1884, p. 1077, Dr. B. Kostyleff, of Tver, furnishes details of an interesting case of hydrophobia in a railway guard, aged 63, of drinking habits, who had been bitten by a suspicious dog about four months before his admission. The wound having rapidly healed, the patient remained well until August 5, when there appeared extraordinary sexual excitement (which remained up to his death), headache, general malaise, loss of appetite, and thirst; and two days later, hydrophobia with pain in the throat. When brought to the Zemsky Hospital, on August 8, the patient suffered greatly from respiratory and pharyngeal spasms, which occurred almost every minute; he spat out frothy saliva with admixture of blood, and laboured under intense general excitement with delirium of persecution. Following the instance of Professor Lashkevitch, Dr. Kostyleff gave trial to the oxygen treatment. The effect was most striking. After the first few inhalations, respiratory spasms and salivation disappeared; the lips, which had been cyanotic, turned rosy; the patient became calm, and soon requested to eat, drink, and smoke. Being extremely gratified with the results, the patient did not for a moment part with the inhalatory tube, and during the first day inhaled about twelve cubic feet of the gas. He slept quietly for one hour and a half in the night, but then a severe paroxysm of dyspnœa supervened, which was cut short by reassuming the inhalations. After a chloral-enema, he fell again asleep for several hours, and afterwards was able to swallow two or three glassfuls of tea and milk. He was able to often drink also during the next day; but intense delirium set in, the patient ceasing to recognise the surroundings, and stubbornly refusing to inhale oxygen. Still, he inhaled by snatches about five cubic feet of the gas. On the third day he was steadily sinking from exhaustion, and on the fourth day he died from failure of the heart and respiration, remaining unconscious and delirious up to the end. On analysing the case, Dr. Kostyleff states that, while not believing in the curability of hydrophobia by oxygen (or by anything), he will still pursue the same treatment in every similar case, since it relieves the patient's sufferings both rapidly and powerfully.

V. IDELSON, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

4927. PARK.—Kieselgühr: a New Surgical Dressing. (*Practitioner*, September, p. 165.)

4928. SMITH, R. SHINGLETON.—Intrapulmonary Injections. (*Brit. Med. Jour.*, October, p. 817.)

4929. EMOND.—Treatment of Bronchial Asthma at Mont Dore. (*Lancet*, June, p. 1161.)

4930. BONAVIA.—Uses of the Liquid Extract of Ergot. (*Lancet*, August, p. 276.)

4931. YANDELL.—Feeding and Starving in the Treatment of Disease. (*Amer. Med. Pract.*)

4932. VON JAKSCH.—Urethran as a Hypnotic. (*Brit. Med. Jour.*, September, p. 611.)

4933. MONCKTON.—Arsenic in Lymphadenoma. (*Brit. Med. Jour.*, September, p. 598.)

4934. BULLAR.—Feeding *per Nares* in Dysphagia. (*Practitioner*, October, p. 263.)

4935. BAUDUY.—The Use of Cucaine in Diseases of the Nervous System. (*New York Med. Record.*)

4936. ST. GEORGE.—Stigmata Maidis in Vesical Catarrh. (*Lancet*, October, p, 798.)

4937. AULD.—Hydrastis in Dyspepsia. (*Lancet*, November, p. 885.)

4938. Pilocarpine as a Galactagogue. (*Lancet*, November, p. 885.)

4939. COHEN.—Atropine in Acute Coryza. (*Philadelphia Med. Times*, Aug. 8.)

4940. Chlorate of Potash in the Treatment of Hæmorrhoids. (*Therap. Gaz.*, July 15.)

4941. JOSHAM.—Pilocarpine in Acute Alcoholism. (*Philadelphia Med. News*, Sept. 19.)

4942. MEUNIER.—Nettles as a Styptic. (*Lancet*, October p. 647.)

4943. Aitken.—Subcutaneous Injection of Salts of Quinine. (*Brit. Med. Jour.*, October, p. 695.)

4944. Pellacani.—The Active Principles of Piscidia Erythrina. (*Annali di Chimica Medico-Farmaceutica*, August 1885.)

4945. Rodriguez, A.—Pichi or Fabiana Imbricata in Diseases of the Urinary Tract. (*El Siglo Medico*, Oct. 4, 1885.)

4946. Gonzales, J. R.—Treatment of Cholera Morbus. (*Rev. de Med. y Cirurgia Practicas*, Sept. 7 and Oct. 7, 1885.)

4947. Cervello and Valenti.—On the Combined Effects of Morphia and Paraldehyde. (*Annali di Chimica Medico-Farmaceutica*, Aug. 1885.)

4948. Chiara, Prof.—Antipyrin in Obstetrics. (*Ann. di Ostetricia*, 1885, p. 1.)

4949. Garcia, Manuel V.—Paccra-Paccra or Ranunculus Giganteus. (*La Cronica Médica, Lima*, Aug. 1885.)

4950. Falkenberg.—On Naphthalin in Dysentery. (*Voĕnno-Sanitarnoĕ Delo*, No. 40, 1885, p. 446.)

4951. Smirnoff, Professor.—On the Treatment of Syphilis by Subcutaneous Injection of Calomel. (*Voĕnno-Sanitarnoĕ Delo*, No. 29, 1885, pp. 319-20.)

4952. Sher, S.—On the Treatment of Croupous Pneumonia by Inunctions of Mercurial Ointment. (*Voĕnno-Sanitarnoĕ Delo*, No. 26, 1885, pp. 285-6.)

4953. Lentovsky, S. — On the Influence of Nitroglycerine on the Excretion of Albumen in Nephritic Patients. (*Meditz. Pribavl. k'Morsk. Sborn.*, Sept. 1885, pp. 188-201.)

4954. Krassovsky, N. A.—On Joiner's Varnish in Burns and Scalds. (*Proceedings of the Viatka Medical Society*, Nos. 10, 11, and 12, 1885, p. 18.)

4955. Akuloff, A. J.—On Cucaine in Uterine Spasm and Eclampsia. (*Proceedings of the Vilna Medical Society*, No. 8, 1885, p. 3.)

4956. Doljenkoff.—On Carbolic Acid in a Case of Snake-bite. (*Russkaia Meditzina*, No. 38, 1885, p. 708.)

4957. Kozlovsky.—On Kephir in Phthisis. (*Vratch*, No. 1, 1884, p. 10.)

4958. Buzia.—On Lantanin. (*Pharm. Zeitung*; and *Fortschritt*, Sept. 5.)

4959. Hesse.—The Bark of Remijia Purdieana and its Alkaloids. (*Annalen der Chemie*, and *Der Fortschritt*, Oct. 5.)

4960. Boas.—The Phosphorus Treatment of Rachitis. (*Deutsche Med. Zeitung*, and *Der Fortschritt*, Nov. 20, 1885.)

4961. Mosetig-Moorhof.—Lactic Acid in the Treatment of Pathological Tissues. (*Monats. für Prakt. Derm.*, and *Der Fortschritt*, Nov. 20, 1885.)

4962. Battelheim.—A Contribution to the Knowledge of Antipyrin. (*Mediz. Jahrb.*, Heft ii. and iii., 1885.)

Art. 4927. *Park on Kieselgühr, a New Surgical Dressing.*—In the *Practitioner*, September 1885, p. 165, Dr. Park describes a new dressing for sores and ulcers, composed of burnt kieselgühr and iodoform, in the form of a powder, to which some eucalyptus oil is added to disguise the odour. Kieselgühr is otherwise known as white peat. When this is burnt in a furnace, an extremely light powder is the result, composed entirely of inorganic ash, which is extremely absorbent and antiseptic. As a diluent for iodoform, it has no equal. It is well adapted for insufflation, and is useful in naso-pharyngeal affections, as well as in gynæcological practice. For cases of chancroid, equal parts of iodoform make a good form of dressing. Mixed thoroughly with absorbent wool, it adds greatly to its absorbent power, and furnishes it with detergent and antiseptic qualities.

4928. *Smith on Intrapulmonary Injections.*—This very able and exhaustive paper, by Dr. R. Shingleton Smith, was read at the meeting of the British Medical Association in Cardiff, and is published in detail in the *Brit. Med. Jour.*, Oct. 1885, p. 817. It traces the history of intrapulmonary injections from the time of Pepper, 1867, up to the present time. Dr. Smith having found much benefit from iodoform internally, determined to try it as an injection, and found it perfectly safe and harmless, but, in the five cases quoted, not attended by the good for which he had hoped. An ethereal solution of iodoform, 1 in 5, was employed. In case 1, gangrene of the lung, fœtor was diminished, and the symptoms generally were alleviated. In case 2, pleuro-pneumonia, the expectoration diminished. In case 3, chronic tubercular pleurisy, the improvement was marked. In cases 4 and 5, no marked results were noted. This mode of treatment is still *sub judice*, but is likely, Dr. Smith thinks, to become familiar, efficient, and useful.

4929. *Emond on the Treatment of Bronchial Asthma at Mont Dore.*—Dr. Emile Emond, in the *Lancet*, June 1885, p. 1161, reports two cases illustrative of the value of the Mont Dore treatment for asthma, especially in its catarrhal or humid form. Dr. Emond alleges that the waters can be 'sedative, excitant, derivative, even substitutive, according to the mode of application and the duration of the treatment.' First, water is taken as drink; it gives an increased action to the nutritive functions and the circulation. Next, the inhalation of vapour has proved most valuable in bronchial spasm, due possibly to the vaporised arsenic and carbonic acid contained in the waters. The half baths of the Pavilion at 110° produce wonderful effects. On leaving, after a bath of five to twelve minutes, a feeling of comfort succeeds almost immediately to the general excitement, the body is covered with perspiration, and the breathing returns to its normal condition. Lastly, the spinal douche, largely used, stimulates the vaso-motor nerves, re-establishes the skin functions, and produces the best results. A sedative influence is the most marked effect of the Mont Dore treatment, which, combined with their local resolvent action upon congested mucous membranes, make these waters most valuable in treating both spasmodic and catarrhal asthma. Thénard stated in his note to the Académie des Sciences, 'One cannot doubt that it is to the presence of arsenic that one ought to attribute the powerful action of this water upon the animal economy.'

4930. *Bonavia on the Uses of the Liquid Extract of Ergot.*—In the *Lancet*, Aug. 1885, p. 276, Surgeon Bonavia writes a short article on the uses of ergot. Its action in menorrhagia is well known. It is also of great benefit in hæmoptysis and epistaxis. Very few, however, may know that ergot will cure hiccough. The author narrates the case of a policeman in the hospital at Etawah, who was admitted with obstinate hiccough. All kinds of remedies were tried, but nothing seemed to do any good; and, as a last resource, drachm-doses of ergot were given, on the theory that this drug had a decided action on muscular fibre. The first dose moderated the spasm, the second did further good, and the third or fourth stopped it altogether. The patient had some rest, but later on the hiccough returned. Three or four doses of the ergot stopped it again, and it did not return. Another case occurred some months later, and the same treatment was adopted with similar results.

4931. *Yandell on Feeding and Starving in the Treatment of Disease.*—In the *American Med. Practitioner*, Dr. Yandell gives some interesting notes of personal experience of a severe attack of typhoid fever. For nine weeks, the author states, he was delirious, the whole of which time remained a blank except in one particular—viz., food, to which a distinct aversion was recollected. From personal experience he states that food was often given to his detriment, and always against his inclination. Since this attack he says he has made several short fasts, in the hope of wearing out a rheumatism. On one occasion he took only three glasses of water a day for eleven days, and felt no inconvenience from the abstinence. During the last few months, the author treated five cases of typhoid practically without food—that is, without food except when called for, or when delirium was present, and then only when it was not refused. One case occurred in the person of a young man, who went seventeen days on two or three glasses of water each twenty-four hours. On the morning of the eighteenth day he had some chicken-soup, and a day or two afterwards his appetite returned, and he made a good recovery. In the other cases the abstinence was not so protracted, but food was given to none until it was acceptable, and all went through their attack with less trouble than those who were plied with food. When food is given, milk peptonised by Fairchild's process is more digestible than plain milk, and the beef peptonoids of Reed and Carnrick are usually an acceptable and easily assimilated food.

4932. *Von Jaksch on Urethran as an Hypnotic.*—In the *Brit. Med. Jour.*, Sept. 1885, p. 611, reference is made to some experiments of Dr. Von Jaksch's on the value of urethran ($NH_2CO_2C_2H_5$) as an hypnotic. It was found that a dose of 7½ grains usually produced some hours' comfortable sleep. In a case of painful aortic aneurysm with insomnia, a dose given at 6 P.M. and repeated at 11 P.M. produced four hours' good sleep. The next night three doses, at intervals of two hours, produced five hours' sleep. The author tried urethran 110 times in twenty different cases, and was highly satisfied with the results obtained.

4933. *Monckton on Arsenic in Lymphadenoma.*—In the *Brit. Med. Jour.*, Sept. 1885, p. 598, Dr. Stephen Monckton records the case of a man, aged 57, who suffered from enlarged lymphadenomatous glands in the armpits and groins. The author decided to try arsenic in a new form of pill-preparation carried out at Hamburg, the principle being to invest the drug in keratin or horn-gelatine, in such a way as to render the pill insoluble in the acid fluids of the stomach, while it becomes readily dissolved in the alkaline contents of the upper bowel. A supply of pills was obtained from Bell & Co., each pill containing one-thirteenth of a grain of arsenious acid. The pills were commenced on April 5, and were continued until June 4, at the rate of three a day. During this time the glands everywhere gradually diminished in size; but, unfortunately, just at this time the patient was seized with pleuro-pneumonia and died. The author remarks that he had never seen glands disappear so rapidly under any other treatment.

4934. *Bullar on Feeding per Nares in Dysphagia.*—Mr. J. F. Bullar describes several cases in the *Practitioner*, Oct. 1885, p. 263, where this mode of feeding saved life after tracheotomy and in other diseases. So little inconvenience is experienced by the patient, that often the tracheal tubes have been passed through the nose while the child was scarcely awake, sleep following quickly on the withdrawal of the tube. By this means a sufficient quantity of peptonised, or otherwise prepared, food may be injected into the stomach every few hours, so securing the administration of a known quantity, causing much less disturbance to the child, even if the mode be objected to, than the constantly forced feeding by means of the spoon. [A very extensive series of papers upon this subject may be consulted in sect. 1389 : 2 of the *Medical Digest.*—*Rep.*]

4935. *Bauduy on the Use of Cucaine in Disorders of the Nervous System.*—In the *New York Medical Record*, a paper by Dr. Jerome Bauduy records his experience of the use of cucaine. Cucaine, says Dr. Bauduy, not only replaces alcohol and morphine, but creates a positive disgust for these agents, enabling them to be withdrawn completely and at once, without any difficulty, the cucaine itself being easily discontinued. If the hypodermic treatment pass out of the doctor's hand, a cucaine habit is created, a habit more dangerous and disastrous than morphinism or alcoholism. In the obstinate vomiting of hysteria, or pregnancy, cucaine acts like a charm; and, indeed, all the anomalous symptoms of hysteria yield to the action of cucaine, if used hypodermically. In all cases where the brain or spinal cord act imperfectly, cucaine is the sheet-anchor. In the cold stage of ague, Dr. Bauduy has secured the happiest results. It is in cases of insanity that Dr. Bauduy looks for the greatest triumphs of this new drug, especially in hypochondriacal insanity. In mania, too, its action is prompt and decisive.

4936. *St. George on Stigmata Maidis in Vesical Catarrh.*—In the *Lancet*, October 1885, p. 798, Mr. George St. George contributes an exhaustive article ou the value of this agent, which is much used in America in cases of vesical troubles. The chief value seems to centre in its diuretic properties, and by some it is called an anodyne diuretic; *vide* LONDON MEDICAL RECORD, 1883, p. 149. Mr. St. George uses the drug as prepared by Messrs. Parke, Davis, & Co., administering one drachm of the fluid extract every six hours. Two cases are given in confirmation of the author's views regarding the specific value of the drug, but in each instance so many other means were simultaneously employed, that it is very difficult to differentiate the action of the maize stigmata. [A reference to the *Medical Digest*, 326 : 1 and 1066 : 2, will show that zea mays has long enjoyed a reputation in disease of the urino-genital organs.—*Rep.*]

4937. *Auld on Hydrastis in Dyspepsia.*—Mr. A. G. Auld, in the *Lancet*, November 1885, p. 885, speaks very positively of the specific influence of hydrastis in small doses, in that form of dyspepsia common among females, where there is pain and sinking at the epigastrium, with nausea and constipation, associated with general debility, nervousness, wandering pains, and possibly leucorrhæa. The dyspepsia of phthisis and cancer is also amenable to the drug, as well as that form of indigestion resulting from alcohol. [A very valuable editorial article on the uses of hydrastis in various diseases is published in the *Brit. Med. Jour.*, August 1880, p. 746; vide *Medical Digest*, sect. 470 : 3.—*Rep.*]

4938. *Pilocarpine as a Galactagogue.*—In the *Lancet*, November 1885, p. 885, the value of pilocarpine as a galactagogue is confirmed by a case there recorded. After several doses of one-third and one-fourth of a grain as mixture, the characteristic effects of the drug were produced, accompanied by an abundant secretion of the milk. [For observations by Dr. Ringer and others, vide *Medical Digest*, sect. 1601 : 2.—*Rep.*]

4939. *Cohen on Atropine in Acute Coryza.*—In the *Philadelphia Med. Times*, Aug. 8, 1885, Dr. Solis Cohen confirms observations previously made, of the marked value of sulphate of atropine in severe acute coryza. He gives 1-120th of a grain every four hours, either as granule or in solution. Frequently two doses serve to control the disease.

4940. *Chlorate of Potash in the Treatment of Hæmorrhoids.*—In the *Therapeutic Gazette* for July 15, 1885, the use of chlorate of potash in the treatment of piles is thus described. Half-an-ounce of the saturated solution, to which has been added five to ten drops of laudanum, is injected into the rectum night and morning. The relief is often most marked, even in very severe cases.

4941. *Josham on Pilocarpine in Acute Alcoholism.*—Dr. Josham, in the *Philadelphia Med. News* of Sept. 19, 1885, thus graphically describes the action of one-third grain of this drug hypodermically injected in persons suffering from intoxication. Its sobering effects are remarkable. After the sleep, the patient arouses perfectly rational and subdued, a consummation of no little import, as all know who have to treat victims of alcohol, since it renders them amenable to moral influence. The transformation wrought on the physical appearance is almost marvellous. The tense, red, bloated countenance, the bleared congested eyes, and general repulsive facial aspect, pass away. The skin looks pale, clean, and soft, the features calm and easy, the eyes clear, or only with a slight yellowish fringe. Clothed in such an innocent guise, the subject of a recent debauch might easily deceive even an expert. There are three ways in which the pilocarpine doubtless exercises its therapeutic influence in alcoholism : (1) by lowering cerebral blood-pressure ; (2) by eliminating alcohol ; (3) by increasing the absorption of oxygen.

4942. *Meunier on Nettles as a Styptic.*—In the *Lancet*, Oct. 1885, p. 647, is reported a new styptic, discovered by a French priest who suffered from bleeding at the nose, and, after vainly trying many remedies, he finally stopped the bleeding by drinking an infusion of the common nettle (*Urtica dioica*). Dr. Rothe made some experiments with the external application of the juice of this plant. Applied by means of cotton-wool to bleeding wounds, it promptly arrested hæmorrhage. In case of bleeding from the nose, a small cotton plug steeped in the liquid quickly stops the bleeding. The blood-clot formed by this styptic does not so easily crumble and decompose as when a solution of perchloride of iron is used. Owing to its alcoholic properties, the nettle solution has antiseptic qualities, for which reason it is especially useful in hæmorrhage from the mucous membrane of the uterus. [In the *Lancet*, p. 700, Mr. John Malcolm writes that in 1814 Dr. Thornton published a book called *The Family Herbal*, in which it is stated that the juice of the nettle is most useful in stopping hæmorrhages from the nose, &c. (Vide *Medical Digest*, 363 : 2)—*Rep.*]

4943. *Aitken on the Subcutaneous Injection of Salts of Quinine.*—In the *Brit. Med. Jour.*, 1885, p. 695, Dr. Lauchlan Aitken comments on the unpleasant sequelæ of employing preparations of quinine in hypodermic injections. To avoid these, the author adopts the following precautions. One grain of the bisulphate or hydrochlorate of quinine, dissolved in six minims of equal parts of pure glycerine and water, forms a solution, which, when injected into the subcutaneous cellular tissue, will be rapidly absorbed without deposition of any crystals of quinine. Thirty minims of a solution thus made, to which 2 per cent. of pure carbolic acid is added, can be used for one injection. The carbolic acid helps to lessen the pain which is produced by the quinine. This mode of administering the drug is especially useful in cases of pernicious malaria, when quinine cannot be borne by the mouth or rectum. RICHARD NEALE, M.D.

4944. *Pellacani on the Active Principles of Piscidia Erythrina.*—Although the hypnotic and sedative properties of this leguminous plant are now generally recognised, it is not yet known to which of its constituents these properties are due. Hart (*Detroit Med. Gazette*, 1883) considers the most important component an alkaloid having the formula $C^{29}H^{24}O^{8}$. Much less important, according to him, are the abundant resinoids and the small quantities of ethereal oils and glucosides. The advantages claimed for piscidia over other hypnotics more commonly employed, are relative chiefly to the secondary actions which often render the employment of the latter difficult or harmful. The action of piscidia is limited to the cerebral hemispheres solely, so that it causes tranquil sleep, perfectly resembling physiological sleep, without consecutive phenomena in any point of the organism. Pellacani has given the extract largely in cases of heart-disease, when chloral could not be given. In no case did it affect the circulation. Animals bear very large doses of the extract, and Pellacani attributes the effects noticed by some observers to the alcohol given with the extract. When this is freed from alcohol, rabbits and dogs take 10 to 12 grammes without any noticeable effect. Injections of 3 to 5 centigrammes of sulphate of piscidina in one cubic centimètre of water in frogs, cause narcosis with perfect conservation of reflex movements. This period is protracted for two or three days, after which a state of spinal super-excitability gradually supervenes, ending in tetanus. In the apathy and immobility of the animal, the alterations of co-ordination, the complete loss of cerebral activity, there is a complete parallel to the influence of morphia ; both these substances diminishing the nerve-excitability of the anterior, middle, and posterior parts of the brain, with, in the last period, increased excitability of the grey substance of the spinal cord. In rabbits, after the injection of 10 to 15 centigrammes of piscidina, slight somnolence is noticed, with increased reflexes. In cats, the action is more marked, though even in them it is necessary to give not less than 12 centigrammes to each kilogramme of body-weight. So far, the analogous comportment of piscidina with morphia seems to support the hypothesis that the alkaloid is really the most important principle of the piscidia bark, and we know the relations which exist between the action of these vegetable hypnotics and the different degrees of development of the nervous centres in mammals. Further experiments, however, do not support this view. Thus, neither in healthy individuals nor in states of insomnia in mental diseases, were satisfactory results obtained with piscidina. The alkaloid certainly did not produce so great an effect as the extract. Better results were obtained with a glucoside soluble in water and alcohol, and precipitated from watery solutions of the bark by acetate of lead in the presence of nitric acid. But even with this glucoside large doses, even half a gramme, were necessary to cause slight sleep in man. It therefore cannot be the only hypnotic element in the bark, since a few grammes of the extract cause profound sleep. It does not seem possible, therefore, at present to isolate from piscidia bark any definite chemical substance representing all its therapeutic properties.

4945. *Rodriguez on Pichi or Fabiana Imbricata in Diseases of the Urinary Tract.*—The pichi or fabiana imbricata of Ruiz and Pavow is an ornamental shrub, common in Chili and the Argentine Confederation. In growth it resembles a pine, the resemblance being strengthened by its camphorated resinous odour. The white flowers, in large terminal racimes, however, show it to belong to the *Solanaceæ*. It contains: 1. an aromatic essential oil, greenish in colour, solidifying soon on exposure to the air; 2. a resin saponifiable by alcoholic solutions of soda and potash, coloured red by sulphuric acid and nitric acid, the red changing to yellow with the latter acid; 3. a fluorescent substance, dichroic, very similar to esculin and its congeners, taviin and fraxian, crystallising in acicular groups, soluble in ether, in alcohol at 80°, and slightly in cold water. It is especially useful in acute or chronic catarrh of the bladder, due to the mechanical irritation of gravel or calculi or to the uric acid diathesis. It rapidly modifies the urinary secretion, calms the irritability of the bladder, and favours the expulsion of the gravel or calculi. It also cures chronic mucous or purulent secretions. Its efficacy in liver-diseases is chiefly due to its powers as a diuretic, and for the same reason it is useful in jaundice, dropsy, and dyspepsia due to deficiency of the biliary secretion. The aromatic oil stimulates secretion generally, but especially that of the kidneys. A fluid extract may be used, containing twenty grammes in each tablespoonful, four to six tablespoonfuls in water to be given daily.

4946. *Gonzales on the Treatment of Cholera by Subcutaneous Injections of Opium.*—Dr. Gonzales publishes, in the *Rev. de Med. y Cirurgia Practicas*, Sept. 7 and Oct. 7, a paper giving the good results obtained in various parts of Spain with subcutaneous injections of opium. Holding with Valleix and Semmola that the gravity of the attack depends on the greater or less disorder occasioned by the virus on the vaso-motor nervous system, he thinks that opium is the remedy. He administers it subcutaneously to avoid the uncertainty of absorption of the drug when given by the mouth, and the danger of poisoning from accumulated doses. He uses the extract of opium dissolved in distilled water, 2 to 6 grammes. In Ciampozuelos, with a population of 3,500, from June 12 to August 22, there were 451 cases and 117 deaths. Of these, 230 were treated with hypodermic injections of opium, and only 22 died; of the 221 not treated in this manner, 95 died.

4947. *Cervello and Valenti on the Combined Effects of Morphia and Paraldehyde.*—Morphia increases the effects of paraldehyde, as it does those of chloroform and chloral. It not only prolongs the sleep induced by efficient doses of paraldehyde, but renders small inefficient doses active. Thus the author found that one centigramme of hydrochlorate of morphia, and one gramme and a half of paraldehyde, when given separately to a rabbit weighing about two kilogrammes, produced no hypnotic effect; but the same quantities given together caused deep sleep, lasting for several hours. Unlike chloral and other hypnotics, paraldehyde has no harmful secondary action. The simultaneous action of morphia and paraldehyde was found by the authors, in a careful series of experiments, to increase the frequency of the heart; the arterial blood-pressure is maintained, respiration being less frequent than in normal sleep. They recommend the mixture as a powerful hypnotic, not depressing the functions of respiration and circulation, but acting rather as heart-tonic. The mixture, too, has the advantage of being an union of an hypnotic and an analgesic, and thus is indicated in many pathological conditions, in which neither paraldehyde nor morphia can be given alone.

4948. *Chiara on Antipyrin in Obstetrics.*—Prof. Chiara has given antipyrin in various pregnant women, and his conclusions are these. 1. Antipyrin in therapeutic doses has no appreciable action on the uterus. 2. Pregnancy does not modify the action of antipyrin. 3. When it is indicated to combat fever arising during gestation, antipyrin may be administered without fear. 4. Antipyrin favours the continuance of pregnancy by subduing the fever, as do other antipyretics.

4949. *Garcia on Paccra-Paccra or Ranunculus Giganteus.*—Paccra-paccra, or Ranunculus giganteus, is a perennial plant indigenous to Peru, growing at high elevations, 4,500 mètres above the level of the sea; its flower is solitary and large, greenish in colour. The natives believe that it increases the fecundity of cows and mares, and give it to them for that purpose. Dr. Garcia has made careful observations of its effects on dogs; by giving it to two bitches he succeeded in bringing on a period of heat, with swelling of the vulva and sexual desire. He mentions the case of a mare which had not conceived for five years, and which, after eating the herb, became pregnant; also the case of a married woman aged 30 or more, who had never been pregnant, and who, after taking a decoction of the plant in wine, conceived, to her great content.

G. D'ARCY ADAMS, M.D.

4950. *Falkenberg on Naphthalin in Dysentery.*—At a recent meeting of the Moscow Military Medical Society, Dr. Falkenberg reported (*Voënno-Sanitarnoë Delo*, No. 40, 1885, p. 446) that he had obtained excellent results from the internal administration of naphthalin, in combination with castor-oil, in numerous cases of dysentery. A marked improvement was manifest on the second day of the treatment, complete recovery ensuing in five or six days. In only a few cases it became necessary to resort to other therapeutic means, such as opium, ipecacuanha, &c. The author's statements are energetically supported by Dr. Karelin, who has seen naphthalin 'doing wonders' in dysentery which broke out in the Nesvijsky Regiment; and by Dr. Kusmin, who has tried the naphthalin treatment of dysentery in the Infirmary of the Foundling and Lying-in Home (Vospitatelnyi Dom), in Moscow. According to the latter observer, the powdered drug acts better than the crystalline.

4951. *Smirnoff on the Treatment of Syphilis by Subcutaneous Injection of Calomel.*—At a meeting of the Helsingfors Military Sanitary Society, Professor Smirnoff made a communication (*Voënno-Sanitarnoë Delo*, No. 29, 1885, p. 319) on the treatment of syphilis after the method recommended about twenty years ago by Professor Scarenzio, of Padua, and somewhat modified by the author. Dr. Smirnoff uses calomel suspended in glycerine, after the following formula. ℞ Calomelanos per vaporem parati, grana xii; glycerinæ, ʒij. Misce. Ad vitrum nigrum. He introduces the mixture under the skin by means of an ordinary Pravaz's syringe, eight and a half divisions of which must contain exactly 10 centigrammes of calomel. He injects 20 centigrammes at a sitting, 10 centigrammes into each buttock, at a point one inch backwards from the great trochanter. The injections are repeated every two weeks. Women being more susceptible to the action of mercury, the author uses in them on subsequent occasions only one ten-centigramme dose (while in men he invariably injects two similar doses). As far as the author's experience goes, in primary and secondary syphilitic forms the new method proves as effective as mercurial inunctions; while in tertiary (even in inveterate) cases it even surpasses the inunctions. The author never saw formation of abscesses in male cases, and very seldom observed suppuration in women. Drs. Saffientini, of Padua, Batraszewski, of Warsaw (who tried Scarenzio's method in seventy cases), Muenggren, of Stockholm (100 cases), and Louis Julien, of Paris, are also favourably impressed with this simple and rapid plan of the treatment. Cure follows after two or three sittings.

4952. *Sher on Mercurial Inunctions in Pneumonia.*—In the *Voénno-Sanitarnoë Delo*, No. 26, 1885, p. 285, Dr. S. Sher, of Proskurov, Podolsk Government, writes that the treatment of croupous pneumonia by local applications of cold and by rubbing in grey mercurial ointment (two drachms daily) seems to be very effective, since it apparently relieves the symptoms and shortens the course of the disease, the average duration of the latter (from rigor to defervescence) being only five days. Of seventeen cases treated after this method, only one ended fatally. In five of the cases, both of the lungs were affected.

4953. *Lentovsky on Nitroglycerine in Nephritis.*—In a preliminary note in the *Meditz. Pribavl. k'Morsk. Sborn.*, Sept. 1885, p. 188, Dr. S. Lentovsky, house-physician to the Cronstadt Marine Hospital, states that, following the suggestion of Professor V. A. Manassein, he administered nitroglycerine in six cases of chronic nephritis in order to verify Professor Rossbach's observations, and to throw some light on the excretion of albumen in such patients, both under the administration of the drug and without it. At first, the author gave nitroglycerine in the shape of tablets containing one-hundredth of a grain, beginning with four tablets a day, and then daily adding one tablet until a daily dose of ten tablets was reached. In later cases, an alcoholic solution (1 grain of nitroglycerine to 25 scruples of alcohol; 5 minims = $\frac{1}{100}$ grain) was administered. No headache was ever observed. Under the influence of the drug, the absolute and per cent. amount of albumen in the urine was diminished, the daily quantity of urine was increased, dropsy rapidly disappeared, the pulse became softer, the general state improved, and the body-weight augmented. When, simultaneously with nitroglycerine, hot water baths were used, dropsy disappeared with striking rapidity. [Dr. Burjinsky's paper on the same subject will be found in the London Medical Record, Aug. 1885, p. 340. The thorny path of a Russian scientific worker is beset with many obstacles, of which our European brethren scarcely have a notion. It might be very amusing, if it were not so provoking, to learn that Dr. Lentovsky was nearly compelled to give up his useful work, since chemists and druggists refused to supply him with such a suspicious politically looking drug. For the realisation of his plans he is solely indebted to efforts of Drs. V. S. Kudrin (Surgeon-General of Marine General Staff) and D. V. Mertzaloff (late Superintendent of the Cronstadt Marine Hospital).—*Rep.*]

4954. *Krassovsky on Joiner's Varnish in Burns and Scalds.*—Dr. N. A. Krassovsky, of Yaransk, Viatka Government, reports (*Proceedings of the Viatka Medical Society*, Nos. 10, 11, and 12, 1885, p. 18) that in two cases of burns of the second degree, he has obtained excellent results from repeatedly painting the parts injured with the common alcoholic varnish used by joiners. Pain immediately disappeared, and when the film of dry varnish fell off, it left the sound skin covered with epidermis. The author concurs with Dr. Svislovsky in that this plan of treatment is applicable only in cases where the cuticle remains unbroken. The author borrowed the use of varnish in burns and scalds from popular medicine, the method being extensively practised by peasants and artisans of the Yaransk district.

4955. *Akuloff on Cucaine in Uterine Spasm and Eclampsia.*—At a recent meeting of the Vilna Medical Society, Dr. A. J. Akuloff briefly communicated (*Proceedings of the Vilna Medical Society*, No. 8, 1885, p. 3), that, having been called to a case of protracted labour, he found (on the fifth day after the appearance of labour-pain) the os spasmodically closed, 'tightly stretched as a string,' and extremely painful. An intra-uterine injection of a cucaine solution (about one-third of a grain of the alkaloid) being made, pain and spasm disappeared, and in two hours regular and effective uterine contractions set in. Dr. Akuloff used cucaine in the same way also in eclampsia, and saw disappearance both of general convulsions and of spasmodic closure of the os.

4956. *Doljenkoff on Carbolic Acid in Snake-bite.*—In the *Russkaia Meditzina*, No. 38, 1885, p. 708, Dr. Doljenkoff, of Tchernianka, reports the case of a girl, aged 15, who had been bitten in the foot by a snake [of what species is not stated]. When first seen by the author an hour or two later, she was suffering from severe headache, frequent vomiting, extreme prostration, profuse perspiration, fever (40° C.); the foot, as well as the face, eyelids, and lips, were swollen. Various stimulants having failed, the author injected four syringefuls of a carbolic solution (10 grains to 1 ounce of water) under the skin of the injured foot, the corresponding leg, and both of the forearms. Within an hour the temperature fell to 38° C., vomiting ceased, and the swellings diminished; the patient got up, and shortly recovered altogether. [*See* Dr. R. Neale's *Medical Digest*, sect. 510: 3.]

4957. *Kozlovsky on Kephir in Phthisis.*—Dr. Kozlovsky, of the Military Hospital, in Kiev (*Vratch*, No. 1, 1884), administered kephïr (cow's milk brought into alcoholic and lactic fermentation by means of 'Prophet's millet,' consisting, according to E. Kern, of *Dispora Caucasica* and *Saccharomyces cerevisiæ*) to phthisical patients with fever and profuse expectoration. The patients took readily from two to three fluid pounds daily. The body-weight at first sinks, but subsequently (in 7 to 12 days) begins to steadily increase, the addition being from 200 to 300 grammes in three weeks. The daily quantity of urine is increased; that of urea at first somewhat increases, then falls, the variations, however, being but slight. Appetite, nutrition, and assimilation markedly improve. Expectoration becomes easy. In one case, a diminution of sputa was noted.

V. Idelson, M.D.

4958. *Buzia on Lantanin.—Der Fortschritt* (Sept. 5, 1885, No. 17) communicates from the *Pharmaceutische Zeitung* an article on this subject. Lantanin is a new antipyretic remedy, moderating, like quinine, the circulation and lowering the temperature. It is the active principle of Lantana brasiliana, a verbenaceous plant indigenous to South America, which has been employed as a febrifuge, from the oldest times, by the inhabitants of Brazil, Paraguay, Bolivia, Peru, &c. Dr. Buzia, of Lima, has used in his clinic the concentrated tincture prepared by the apothecary-in-chief of the hospital, Señor Negrete, and records favourable results in cases of acute articular rheumatism and of typhoid fever. The only objection against the use of this tincture is its disagreeable bitter taste. After many trials, Negrete succeeded in obtaining a pure preparation of lantanin from the plant, which in more than thirty cases under Dr. Buzia's treatment has proved most efficacious.

4959. *Hesse on the Bark of Remijia Purdieana and its Alkaloids.—Der Fortschritt* (Oct. 5, 1885, No. 19) communicates an analysis of a paper by M. C. Hesse, originally published in Liebig's *Annalen der Chemie* and in the *Bulletin de la Société Chimique.* The bark of the Remijia Purdieana, the author states, has been brought into use in consequence of the increasing demand for that of Quina cuprea, which it closely resembles in appearance. It contains, however, different alkaloids; whilst the bark of Quina cuprea yields quinine and homoquinine, from that of the Remijia Purdieana, cinchonine and a new alkaloid, cinchonamine, which has lately been discovered, and described in the *Comptes rendus* by M. Arnaud, are extracted. Besides these, the author succeeded in obtaining from this bark several new alkaloids, viz., concusconine, chairamine, conchairamine, chairamidine, and conchairamidine. The bark contains 2 to 3 per cent. of these alkaloids. They are separated by extracting the bark with boiling alcohol, distilling this alcoholic extract, and again extracting the distillate with ether after addition of soda. On agitating the ethereal extract, with an excess of diluted sulphuric acid, a pale yellow clotty mass will separate (*a*) partially in suspension in the ether, partially in the supernatant aqueous acid (*b*). This solution contains sulphates of cinchonine and of cinchonamine, and also small quantities of sulphates of other alkaloids which constitute the precipitate *a*. On treating the solution *b* with diluted nitric acid, a precipitate of nitrate of cinchonamine will form, whilst the cinchonine will remain dissolved. The alkaloids are separated from the clotty precipitate *a* by means of soda, and are, after desiccation, dissolved in alcohol. On the addition of sulphuric acid diluted with alcohol (one part of acid to eight parts of the alkaloids) to the hot solution, almost the entire quantity of concusconine, forming a sulphate, will be precipitated. By adding a small quantity of concentrated hydrochloric acid to the cold alcoholic alkaline solution, hydrochlorate of chairamine will be separated; and, by finally adding some sulphocyanate of potassium to the hot solution, crystalline sulphocyanate of conchairamine will form, followed by a tar-like precipitate. The reagent, therefore, ought not to be added so long as the precipitate remains crystalline. The alkaline solution, after the separation of the tar-like precipitate (which has not yet been examined) is treated with ammonia, the precipitated alkaloids are dissolved in benzine, and the benzinic solution is agitated with diluted acetic acid, to which a saturated solution of sulphate of ammonia is added. By this process, the sulphates of chairamidine and of conchairamidine are precipitated, and are afterwards separated by crystallisation.

4960. *Boas on the Phosphorus Treatment of Rachitis.—Der Fortschritt* (Nov. 20, 1885, No. 22) copies from the *Deutsche Medicinische Zeitung* a report by Dr. Boas on the treatment of rachitis with phosphorus. Twenty cases of rachitis of different degrees were treated in this way. Of these twenty children, twelve had the breast temporarily, only four somewhat longer than half a year, and eight were brought up by hand. As substitutes for the mother's milk, various kinds of infants' food were used—in one case Swiss milk. In six cases, the conditions of the dwellings were most unfavourable. The phosphorus was prescribed in daily doses of one to two teaspoonfuls of an emulsion of 1 centigramme (one-fifth of a grain) of phosphorus to 100 grammes (3½ ounces), during a period of from one to three months. At the same time, an appropriate diet was given. The effects of this treatment on the ossification and general functions were highly satisfactory. Twelve patients, after three months' treatment, were able to stand and to walk with comparative safety; in others the effects were less speedy, but an increasing firmness of the bones was evident. Dentition passed very favourably, without undue disturbances, notwithstanding the rapid succession of teeth. In one case of spasm of the glottis, improvement took place eight days after the commencement of the treatment. The general health of the patients was in every instance benefited. In two cases, injurious effects were observed in consequence of over-dosing; instead of one to two teaspoonfuls of the emulsion, a dessert-spoonful daily having been given by mistake. In one case, after eight days' continued use of such large doses, want of appetite, pain, fever, and swelling of the inframaxillary region, with the characteristic signs of diffuse phlegmon, set in. The abscess was opened, after a fortnight's fomentations, by incision, and a teaspoonful of pus mixed with blood was discharged. The incipient phosphorus-periostitis was arrested, and the patient soon recovered. In the second case, a child (three years of age) had already taken five bottles of the emulsion, equal to five centigrammes (five-sixths of a grain) of phosphorus, apparently without injury and with evident improvement of the general condition. Then, as in the first case, phosphorus-periostitis manifested itself; and, on opening the abscess, rough necrosed bone, denudated of its periosteum, was discovered by the probe. At the same time, the child complained of violent pain in the epiphyses of the hands, thighs, and legs; this patient also made a favourable recovery. In both of these cases, phosphorus mixed with saliva had entered into the open alveoli. In conclusion, Dr. Boas points out the beneficial influence of even minute increasing doses of phosphorus on the nutrition of the bones; but at the same time he enjoins great caution, lest over-dosing might take place.

4961. *Mosetig-Moorhof on Lactic Acid in the Treatment of Pathological Tissues.*—*Der Fortschritt* (Nov. 20, 1885, No. 22) communicates, from the *Monatschr. für Prakt. Derm.*, Professor Mosetig-Moorhof's method of treatment of common lupus, corroding ulcers, fungoid growths, and papilloma by lactic acid, which—not injuring the healthy tissues—he prefers to other caustics, which equally destroy the diseased and the normal parts. The most simple manner of applying it is a soft paste of equal parts of lactic acid and of finely triturated silica spread on gutta-percha paper. The paste is removed after fifteen hours, and re-applied after an interval of twenty-four hours. Five to seven applications generally suffice for the cure of common lupús.

FERD. ADALB. JUNKER, M.D.

4962. *Battelheim on Antipyrin.*—Dr. K. Battelheim (*Mediz. Jahrb.*, Heft ii. and iii, 1885) has used antipyrin in pneumonia, typhoid fever, erysipelas, otitis, puerperal fever, peritonitis, diphtheria, and rheumatism. He confirms the beneficial action in reducing febrile temperature, observed by other authors. The untoward symptoms noticed were vomiting, paræsthesia in the hands and feet, and loss of appetite. He has never seen a rash produced by it. Several experiments were performed on dogs by venous and subcutaneous injection, the most marked effects being by the former mode of administration. These were a primary fall of blood-pressure, not hindered by section of the vagi, and ascribed to dilatation of the blood-vessels of the skin, followed by a rise of blood-pressure above the normal, and in prolonged experiments a final sinking. The doses, by the vein, were ·01, 1, and 2 grammes; by the skin, 1, 2·5, and 4 grammes. There was no change in the frequency of the pulse. Battelheim ascribes the antipyretic action of the drug to increased radiation and evaporation, following dilatation of the blood-vessels of the skin.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

4963. SHEVELEVA, OLGA ARK.—On a Case of Double Ovariotomy. (*Vratch*, No. 26, 1885, p. 419.)

4964. LVOFF, J. M.—On a Case of Chronic Vaginismus cured by Inunctions of a 5 per cent. Vaseline Ointment with Hydrochlorate of Cucaine. (*Russkaia Meditz.*, 1885, No. 24, pp. 466-2.)

4965. LVOFF, J. M.—On a Case of Profuse Flooding after the First Coitus. (*Russkaia Meditz.*, 1885, No. 24, p. 460.)

4966. PORRO.—A Case of Laparotomy. (*Gazz. Med. Ital. Lombardia*, Oct. 24, 1885.)

4967. CHAMBERS.—A Case of Extra-uterine Fœtation, with Intracystic Hæmorrhage. (*Australasian Med. Gaz.*, Sept. 15, 1885.)

4968. Post Partum Hæmorrhage. (*Lancet*, August, p. 419.)

4969. HICKS, BRAXTON.—A Condition of the Inner Surface of the Uterus after the Birth of the Fœtus. (*Brit. Med. Jour.*, October, p. 696.)

4970. LAWRENCE.—A Case of Ruptured Uterus: Recovery. (*Brit. Med. Jour.*, Sept., p. 601.)

4971. HUBER. — Prolonged Gestation with Anencephalous Fœtus. (Friedreich's *Blätt. für Gericht. Med.*, 1885.)

4972. PRITZL.—Hypnotism during Labour. (*Wiener Med. Wochensch.*)

ART. 4963. *Sheveleva on a Case of Double Ovariotomy.*—In the *Vratch*, No. 26, 1885, p. 419, Dr. Olga Ark. Sheveleva, house-physician in Professor J. M. Tarnovsky's clinic, reports the case of a woman, aged 28, in whom she diagnosed cystoma of the right ovary, all usual symptoms seemingly pointing in that direction. But on opening the abdomen, and pulling out the tumour, she found that there were present two cysts, the pedicles of which crossed each other in such a way that the larger (25 × 20 centimètres) cyst, growing out of the left ovary, occupied the right side of the pelvis and abdomen, and a far smaller one, growing out of the left ovary, lay in the right side of the pelvis. The pedicles were very long. The right pedicle was encircled by an intestinal loop and adherent to the mesentery. The displacement of the left cystoma was due probably to constant dilatation of the rectum by fæces, the patient suffering from habitual constipation. The patient got up on the sixteenth day.

4964. *Lvoff on Cucaine in Vaginismus.*—In the *Russkaia Meditz.*, 1885, No. 24, p. 460, Dr. J. M. Lvoff, of Kazan, details the case of a delicate, pale, extremely nervous and hysterical married lady, aged 32, who for ten years of her conjugal life had suffered from vaginismus in spite of her being treated by all possible means, including division of the hymen, with subsequent dilatation of the vaginal entrance by means of specula. On examination, the author found nothing abnormal, except some tenderness in the vulva on deep pressure. The introduction of a middle-sized Ferguson's speculum or a forefinger did not produce any pain. Nevertheless, coitus invariably was so agonisingly painful, that even an idea of it sent the patient into hysterics, while on every attempt she became furious (beat and bit her husband, &c.). At the same time, sexual desire with her was fairly strong. There was no masturbation, and no disproportion between the size of the vagina and that of the penis. The author recommended rubbing the whole vaginal orifice with a 5 per cent. ointment of cucaine and vaseline before each coitus, and, since he suspected that the matter was largely due to the patient's imagination and fear, reassured her that the ointment given was an absolutely infallible means for her ailment. The very first intercourse proved painless, and two months later the patient was found pregnant. The cure in the case above is ascribed by the author partly to cucaine, partly to moral influence. Dr. Lvoff is not very enthusiastic about the drug. He never saw any beneficial action of cucaine in several other cases of vaginismus, associated with a hyperæmic state of the external genital parts (in one of these cases temporary relief was obtained from painting with a 10 per cent. solution of nitrate of silver). In non-gonorrhœal urethritis in women, intra-urethral suppositories or bougies, made of cucaine, were able only partly to relieve pain and frequency of micturition. Iodoform and belladonna bougies and ointments gave far better and more rapid results both in these cases and in those of pruritus vulvæ et vaginæ, of acute colpitis, and hæmorrhoidal inflammation of the rectal and anal veins. Dr. Lvoff tried, also, 5, 10, and 20 per cent. cucaine solutions and ointments, for painting the external genital parts during the passage of the fœtal head in labour, the results being utterly unsatisfactory.

4965. *Lvoff on a Case of Profuse Flooding after the First Coitus.*—In the *Russkaia Meditz.*, 1885, No. 24, p. 460, Dr. J. M. Lvoff, of Kazan, describes the case of a newly married, diminutive, but healthy lady, aged 22, in whom, in about three hours after the first coitus (which had taken place a week after the last menstruation), there appeared hypogastric pain and hæmorrhage, which steadily became more and more profuse. The author, who had been called only late in the afternoon, found the patient fainting, pulseless, with all symptoms of acute cerebral anæmia. On examination, the ring-shaped hymen was seen lacerated in three spots, but not bleeding. Blood was flowing in great quantity from the os uteri, which was half open. Under appropriate treatment, flooding was arrested. Considering the fact of hæmorrhage occurring only several hours after connection, Dr. Lvoff concludes that it resulted from a violent irritation of the womb under the influence of the first coitus, with subsequent active congestion of the organ. The patient's husband was of middle stature, but of powerful build, and the connection was painful to the patient.

V. Idelson, M.D.

4966. *Porro on a Case of Laparotomy for Ovarian Fibroma.*—On Oct. 14, Professor Porro performed laparotomy in the Maternità of Milan. The case is very interesting from the rare nature of the disease, which was a true ovarian fibroma, affecting the right ovary. Spencer Wells says that this form of tumour is so rare that, up to 1872, he had never met with a well-marked case in which the disease arose from the ovarian tissue; many cases described as ovarian fibroma being really tumours originating from the uterus, and only involving the ovary in the course of their development. The tumour was skilfully removed, and the pedicle, although traversed by enormous distended vessels, returned to the pelvis. After the operation the patient had no rise of temperature, and is now well.

G. D'Arcy Adams, M.D.

4967. *Chambers on a Case of Abdominal Gestation with Hæmorrhage into the Cyst.*—A woman, aged 38, subject to menorrhagia, following a prolonged labour, with laceration of the perinæum, underwent Emmet's operation on Dec. 13, 1884, and the perinæum was repaired on Dec. 26. After menstruating regularly in January and February 1885, the period became scanty in March, and then ceased entirely. In May, she suffered from a tense feeling in the hypogastrium, and the uterus was felt to be enlarged and high in the pelvis. She was seized with violent abdominal pain and collapse on June 10. Scybala were removed from the rectum. Another attack took place on June 17, and a third a week later. In July the cervix was dilated, and the posterior uterine wall was found, on introduction of the finger into the uterine cavity, to bulge considerably forward, and a similar bulging could be felt in the rectum. On July 14, when this swelling was detected, it was aspirated and liquor amnii was drawn off. Palliative treatment was adopted in vain. On July 18 abdominal section was performed. The uterus was firmly fixed posteriorly; and, when the operator's index finger was passed behind it and to the left, a cavity was opened, and a great quantity of intensely fœtid black fluid escaped. More fluid of the same kind welled up from another cavity and filled the pelvis. It was found impossible to remove the uterus or cyst; the cavity was filled with strips of antiseptic lint and two small antiseptic sponges, and the abdominal wound was closed. The patient rallied for a short time, but died in eight hours. The uterus, tubes, and ovaries were found to be completely intact; a decidua was found in the uterus. The cyst lay immediately behind the uterus, the posterior surface of the body and neck of the uterus forming the anterior wall of the cyst, which filled up the space between the uterus and the rectum. Its wall was everywhere distinct and closely adherent to Douglas's pouch below, and to the ureters and the other soft tissues around. It was divided into two distinct cystic cavities. The left and posterior cavity contained a fœtus and a placenta, with masses of old and recent clots. The anterior had a smooth lining membrane, discoloured at the point where it was contiguous to the placenta in the other cyst. It contained liquor amnii. The fœtus appeared to have reached the thirteenth week of development. It had probably died on or about June 10, during the first attack of pain, when the placenta may have separated and hæmorrhage occurred.

Alban Doran.

4968. *Post Partum Hæmorrhage.*—In the *Lancet*, Aug. 1885, p. 419, a correspondent writes that, being engaged to attend a patient who was accustomed to severe flooding after labour, he gave five grains of gallic acid, twice a day, for three weeks. So soon as the placenta came away no more blood was lost, though in previous confinements almost fatal flooding had followed, in spite of every treatment. [In the *Medical Digest*, sect. 1585 : 2, among the numerous prophylactic measures suggested, it will be seen that gallic acid was used by Dr. Egan in 1874.—*Rep.*]

4969. *Hicks on a Condition of the Inner Surface of the Uterus after the birth of the Fœtus.*—In the *Brit. Med. Jour.*, Oct. 1885, p. 696, Dr. Braxton Hicks draws attention to a condition of the mucous membrane of the uterus, which he has noticed after the expulsion of the fœtus. The first time the author noticed this condition was in a case of very difficult labour, to which he had been called. The placenta was adherent; and, in passing the hand to remove it, he was on the point of mistaking the loose lining of the womb for the placenta, and was about to detach it when, in passing the hand over the placenta, he discovered that what he felt was the uterine surface covered by the smooth membranes. When the uterus is emptied of the fœtus, the area of its inner surface is proportionally reduced, and the lining membrane, in some cases, is thrown into folds, imitating growths springing up loosely from the surface. This condition may cause, in some cases, a feeling as though a portion of the placenta were left. The author desires to draw attention to this fact, so that the danger of mistaking the lining membrane of the uterus for adherent placenta may be avoided.

4970. *Lawrence on a Case of Ruptured Uterus: Recovery.*—In the *Brit. Med. Jour.*, Sept. 1885, p. 601, Dr. Aust Lawrence records the following case. A woman applied to the author for advice. She stated that she was pregnant, and wished to have a living child; she had been confined previously five times, but the children had all died except one, which was born before its time with the aid of forceps. On examining the pelvis, it was found that the antero-posterior diameter was three-quarters of an inch too narrow. Dr. Lawrence decided to bring on labour at the eighth month, but still the child was born dead, owing to the great difficulty in delivering. Next time, the author decided to bring on labour at the end of seven and a half months; owing to a miscalculation of the patient, however, it was eight and a half months before this was done, and, when the author went to bring on labour, he found that pains had already set in, and the right hand and cord were presenting by the side of the head. The hand and cord were pushed back, and a binder was applied. For two hours labour-pains set in very violently, then suddenly ceased. Dr. Lawrence then delivered without difficulty; but, on introducing the finger into the vagina to expel the placenta, it was found that the uterus had ruptured just at the junction of the body and cervix, and the placenta was lying in the left iliac fossa. The placenta was removed, and the patient placed on her left side, with the hips well raised to prevent the intestines from prolapsing. The treatment consisted in keeping her well under morphine, and giving only ice and milk as food. On the fourteenth day, she was up and perfectly well. The author delivered this patient since then of a child that lived only a few hours, and she was again pregnant when the case was reported. RICHARD NEALE, M.D.

4971. *Huber on Prolonged Gestation with Anencephalous Fœtus.*—The prodigious size of many anencephalous fœtuses must have struck the most careless visitors to any large pathological museum; yet it does not seem to have been noticed, even by writers of monographs on teratology, with the single exception of Isidore Geoffroy St. Hilaire. Dr. Huber believes, from a case which came under his observation, that this abnormal bulk is consequent on a prolonged period of gestation. The case in question was that of an unusually intelligent and trustworthy woman, who stated positively that she menstruated last on Aug. 15, 1869; first felt the fœtal movements on Jan. 6, 1870, and was delivered on July 10, 1870, of an anencephalous fœtus weighing 6 Bavarian pounds. The fœtal movements, therefore, were felt on the 144th day, or twentieth week of pregnancy, and delivery took place on the 327th day, instead of the 280th. The legal bearings of such prolonged gestation are obvious, and there is reason to think that prolonged gestation occurs more frequently than is commonly believed. Huber (*Klinik der Gebürtskunde*) reports two cases of 304 and 310 days respectively; and Löwenhardt, out of 245 cases, gives seven which extended beyond 305 days, as do Schlichting and others. In these, however, the fœtuses were normally developed.

E. F. WILLOUGHBY, M.B.

4972. *Pritzl on Birth during Hypnosis.*—Dr. Edward Pritzl announces in the *Wiener Med. Wochensch.*, a case of this kind, the first, he thinks, on record. A young woman was under his care in a lying-in hospital who, he had reason to believe, would be easily brought into a hypnotic condition; and some preliminary trials showed his surmise to be correct. When, therefore, the case ultimately proved to be one in which narcotics should in the usual course be employed, Dr. Pritzl determined to give hypnosis a trial. In spite of her pain and the nervous excitement produced by the presence of several medical men, who wished to witness the experiment, the woman, after looking but a few seconds at the brilliantly illuminated thermometer-bulb that was passed before her eyes, sank back unconscious. The following observations were made. The intervals between the pains lasted nearly two minutes; the pains themselves were more violent than is usual under a narcotic, and lasted on an average fifty seconds, being at their height actively aided by the pressure of the abdominal muscles, and the intensity of the latter was quite normal. The patient was perfectly insensible, but the left lower arm was cramped and the left leg became stiff. There was no change observable in the right side. She turned her head hither and thither as if she were angry, frowned, and groaned. In the intervals, she resembled one asleep. In forty-five minutes from the time she became unconscious, a healthy child was born. In forty-five minutes after this, the woman was roused from her sleep, and would not believe she had been delivered, being hardly willing to own the child. The case up to the time of writing had taken a favourable course. Dr. Pritzl lays stress on the following points as remarkable. 1. It was easy to induce hypnosis in such a case as labour. 2. The pains were violent enough to arouse reflex action of the abdominal muscles but not to rouse the patient. 3. Evidently the hypnotic state accelerated labour; for it had been expected to last several hours. 4. The after-birth stage, which lasted forty-five minutes, was remarkable for the character of the pains which, though short, were intense and assisted by abdominal action; and the loss of blood was only about 300 grammes (mostly coagulated). Dr. Pritzl has similarly experimented in two other cases, which, though successful, were neither so rapid nor so perfect. JOHN ELLIOTT.

DISEASES OF CHILDREN.

RECENT PAPERS.

4973. VON ETLINGER.—Congenital Malformations of the Heart. (*Archiv für Kinderheilk.*, Band vi., Heft 2; and *Deutsche Med. Zeitung*, Aug. 21.)

4974. GAMREKELOFF, V. G.—On the Use of Hot Water in Resuscitating Stillborn Infants. (*Proceedings of the Caucasian Medical Society*, No. 17, 1885, p. 424-25.)

4975. VACHER.—Summer Diarrhœa of Children. (*Brit. Med. Jour*, September, p. 439.)

4976. DAY.—A Case of Intussusception treated by Manipulation. (*Lancet*, Sept., p. 570.)

4977. SAWTELL.—A Case of Hæmatemesis and Melæna. (*Brit. Med. Jour.*, October, p. 741.)

4978. MACKEY.—A Case of Broncho-pneumonia with High Temperature lowered by Warm Bathing. (*Lancet*, October, p. 617.)

4979. JACOBI.—Congenital Deformities. (*New York Med. Jour.*, Aug. 8.)

4980. DAVIS.—Tænia Solium in a Child Two Years of Age. (*Boston Med. and Surg. Jour.*, March 19.)

4981. LANGMANN.—Repeated Attacks of Scarlatina in a Child. (*New York Med. Jour.*, Sept. 5.)

ART. 4973. *Von Etlinger on Congenital Malformations of the Heart.*—Dr. Von Etlinger, of St. Petersburg, relates (*Archiv für Kinderheilk.*, Band. vi.) a case of congenital cardiac malformation, and discusses the subject of diagnosis. He says that, in cases where the aorta arises from the right and the pulmonary artery from the left ventricle, venous blood must pass through the former, and arterial blood must enter the lesser circulation; the child dies soon of asphyxia, unless there be anastomoses between the bronchial and pulmonary veins, through which a portion of the arterial blood may pass into the right heart and aorta, or unless blood from the left ventricle can pass into the right heart through an open foramen ovale, a pervious ductus arteriosus, or an incomplete septum ventriculorum. The following are the diagnosis symptoms of the malformation: cyanosis of the lips, hands, and feet, caused by venous stasis in the general circulation through stenosis of the conus arteriosus, and partly compensated by open foramen ovale and defect in the septum; cutaneous hæmorrhages, diarrhœa, and dyspnœa, due to the chemical alteration of the blood; enlargement of the heart in a longitudinal direction, a systolic murmur at all the four cardiac orifices, and absence of normal heart-sounds. The murmur is, perhaps, dependent on perviousness of the ductus arteriosus. Atelectasis of the lungs and broncho-pneumonic infiltration have also been observed; fever has been often noticed to be absent during inflammatory processes in the lungs in case of congenital inflammation of the heart, perhaps in consequence of the chemical alteration in the blood of the aorta.

A. HENRY, M.D.

4974. *Gamrekeloff on Hot Water Bath in Resuscitating Stillborn Infants.*—The perusal of Dr. D. N. Nikolsky's article on Le Bon's method, in the *Vratch*, No. 46, 1884, p. 781 (*see* LONDON MEDICAL RECORD, June, p. 258), led Dr. V. G. Gamrekeloff, of Tiflis (*Proceedings of the Caucasian Medical Society*, No. 17, 1885), to try hot water bath in a case of his own, after various other means of resuscitating a seemingly lifeless new-born girl had failed. After two momentary immersions, the girl opened her eyes and moved her limbs; after a third, she made an inspiration and cried out. The immersion being repeated several times more, the child's respiration became regular. Dr. M. K. Golbeck, of Tiflis, successfully employed the hot water bath in an adult case of drowning.

V. IDELSON, M.D.

4975. *Vacher on Summer Diarrhœa of Children.*—In the *Brit. Med. Jour.*, September 1885, p. 439, Mr. Francis Vacher contributes a paper on the subject of diarrhœa in children. The author does not believe that there is such a distinct zymotic disease as summer diarrhœa, having a known period of incubation, a definite course, and an infectiousness peculiar to itself. Statistics are given, showing the death-rate in several large towns from what is termed, in the Registrar-General's report, 'summer diarrhœa,' and the following conclusions are drawn from particulars of deaths so registered in the author's own town, Birkenhead. 1. The mortality ascribed to diarrhœa in the summer quarter is not confined to any portion or portions of a district. 2. Fatal cases of summer diarrhœa are sporadic; a second case in the same family or house being a rare exception. 3. Some practitioners never certify deaths as due to diarrhœa, and others certify deaths as due to this cause so frequently as to be necessarily remarked. 4. Deaths ascribed to diarrhœa are mainly of children under one year old, and almost exclusively belong to the working classes. 5. The houses in which these deaths take place are not necessarily old or insanitary. 6. In a large proportion of the fatal cases certified as diarrhœa, convulsions were also present among other symptoms. 7. The duration of the illness varied extraordinarily, from two to three days to two or three months.

4976. *Day on a Case of Intussusception treated by Manipulation, with Cure.*—In the *Lancet*, September 1885, p. 570, Mr. Overman Day records the case of a child aged six months, who was suddenly seized with sickness and diarrhœa, which lasted about four hours, when a large quantity of blood was passed *per anum*. The child was seen soon after the hæmorrhage; it was then collapsed and very livid. Five drops of brandy were given every hour, and a mixture containing ether and ammonia. About eight hours afterwards the author saw the child, and diagnosed the case as one of intussusception. Before proceeding to the usual remedies, it was decided to resort to manipulation through the abdominal walls. This was commenced by a rotatory movement of both hands from across the left to the right side of the abdomen, and to the right iliac region. This having been continued for a quarter of an hour, a distinct gurgle was heard and felt. The child soon recovered, and two days afterwards passed a motion, very dark, offensive, and slimy, but no blood. About two years ago, the author similarly treated a child five years old. After half an hour's manipulation the intussusception was reduced, and a good recovery resulted. The author adds that he has seen ten cases of this affection, but only the two that were treated by manipulation recovered.

4977. *Sawtell on a Case of Hæmatemesis and Melæna.*—In the *Brit. Med. Jour.*, Oct. 1885, p. 741, is recorded a case noted by Mr. T. H. Sawtell. A small male child, born after a natural but tedious labour, suddenly vomited blood twenty-one and a half hours after birth, and a few hours later melæna succeeded. The child rapidly sank, and died twenty-four hours after the first onset of symptoms. On *post mortem* examination of the stomach, there were found several small but deep round or oval ulcers on the posterior wall of the cardiac end, near the lesser curve. The author remarked that he had failed to find any record of a similar case. An interesting case, observed by Dr. Richard Neale, revealed no lesion of any kind.

4978. *Mackey on a Case of Broncho-pneumonia with High Temperature, Lowered by Warm Bathing.*—In the *Lancet*, October 1885, p. 617, Dr. Mackey records the case of a child two years old who was admitted under his care, suffering from his fourth attack of bronchitis. The child was a typical example of rickets; the temperature was 103° F. on admission, with rhonchus and dry râles over both lungs. Three days after admission the temperature went up to 105°·4. The child was then placed in a bath at a temperature of 94° for about twenty minutes, and the temperature fell two degrees. A few hours afterwards it reached 106°·2, and had slight convulsions; the bath was then given at 90°, reducing the temperature to 101°·8, Within three hours the temperature ran up to 105°·8, which the bath reduced to 99°·4. During the next three days the temperature was constantly running up to 105°, or 106°. The warm bath was frequently used, reducing the fever 3 or 4 degrees for a few hours only. On the seventh day after admission, the child died with a temperature of 106°; a few hours previously it had reached 107°. The author remarks that the treatment by warm bathing in pyrexia is not resorted to in many cases. A bath at a temperature of 96° F. will reduce the fever four or five degrees in the course of twenty to thirty minutes.

RICHARD NEALE, M.D.

4979. *Jacobi on Congenital Deformities.*—At a recent meeting of the New York Pathological Society (*New York Med. Jour.*, Aug. 8) Dr. A. Jacobi showed a boy, aged 7, who presented certain congenital deformities. The right upper extremity was normal. On the left hand, the index and little fingers were absent, together with their corresponding metacarpal bones. The left ulna was 14 centimètres long, and the right one 16·75; the left elbow-joint was imperfectly formed, allowing only partial supination. The lower extremities presented symmetrical malformations, excepting in the following respects. The left foot was half an inch shorter and was smaller than the right; the right thigh was longer than the left by about 4 centimètres. The movements of the right foot were much freer than those of the left. The patella was absent on the left side, and imperfectly formed on the right. The right leg was 28, the left 27 centimètres in length. On the left foot, the second and third toes were slightly raised. The chest showed some signs of rachitic development, most marked on the left side. The head and face were nearly symmetrical. His sister, aged 3, had a congenital deformity of the right leg and foot. The tibia had an anterior curve, and at about the junction of the middle with the lower third there was a longitudinal scar half an inch in length. There was decided eversion of the foot, with absence of the fibula. There were but two toes, one being the great toe, the other apparently a blending of two toes. There were three metatarsal bones, the great toe articulating with the first, and the second toe with the two others. The right limb, down to the knee, seemed to be perfect. It was impossible to straighten the leg on the thigh, because of some malformation in the knee-joint. The leg turned outward when it was straightened as far as possible. The right leg was shorter than the left by 1½ inch, being 11 inches long. There seemed to be no anterior tibial artery. The right foot was shorter and smaller than the left. As to the bones entering into the formation of the tarsus, it was impossible to state positively, but the cuneiform bones seemed to be absent. The right patella seemed to be somewhat smaller than the left, and was placed a little externally to the normal position. The three metatarsal bones articulated with the scaphoid and cuboid. Dr. Jacobi had seen three or four cases of absence of the fibula, there being a scar on the leg, which might be supposed to result from an injury at a period of intra-uterine life when the skin was only partially developed.

4980. *Davis on Tænia Solium in a Child Two Years Old.*—At a meeting of the Chicago Medical Society, Dr. C. G. Davis read a report of a case of tænia solium in a child two years old, and exhibited about four inches of the worm, including the head. He was first called to see the child when it had not entirely recovered from an attack of entero-colitis, which it suffered from throughout the summer and autumn. The child was given a number of simple remedies, with raw beef. This treatment seemed to act properly. In a little while portions of tænia began to appear in the discharges. The child was then given half a teaspoonful of pelletierine, followed in an hour by twenty drops of tincture of jalap and a tablespoonful of castor-oil. This was followed by the expulsion of three or four yards of the worm, but the head was missing. The child was then carefully nursed, and its general health looked after, when segments of the worm again appeared in the evacuations. A double dose of the quantity of pelletierine, tincture of jalap, and castor-oil was then administered, when several (seven or eight) more feet of the worm were dislodged, including the head. Dr. Doering stated that he had treated three children having tænia, one of whom was nine years old, another four years of age, and a baby who was but six months old. The last child had been fed on raw beef whilst it was sick with cholera infantum.

4981. *Langmann on Repeated Attacks of Scarlatina in a Child.*—At a meeting of the New York Society of German Physicians, Dr. Gustav Langmann reported a case of a boy, aged 14, who had had twenty-four attacks of scarlatina. About twelve years and a half ago the patient had his first attack of scarlatina complicated with diphtheria; and since that time he had had a regular attack of scarlatina every spring and fall. The rash, angina, rise of temperature, and especially the characteristic desquamation of the palmar surface of the hands, left no doubt as to the correctness of the diagnosis. The urine never contained albumen, and the temperature was seldom higher than 102° F. Dr. William Balser had observed a case in which the patient had six attacks of scarlet fever. Dr. Klotz said that erythema exudativum occurred most frequently in the spring and autumn, and called attention to the fact that, after an exanthema brought on by quinine, a desquamation of the palmar surface of the hands occurred.

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

4982. Jacquemart, Dr.—A considerable Collection of Calcareous Concretions in the Nasal Fossæ. (*Annales des Mal. de l'Oreille et du Larynx*, May 1884.)

4983. Schmiegelow, Dr.—Some remarks on Rhinoliths. (*Revue Mens. de Laryngol., d'Otologie, et de Rhinologie*, Nov. 1, 1884.)

4984. Schrötter, L. von.—On Congenital Bony Occlusion of the Choanæ. (*Monats. für Ohrenheilk.*, &c., April 1885.)

4985. McBride, P.—Some Local Causes of Fœtid Breath. (*Edin. Med. Jour.*, Jan. 1885.)

4986. West.—A Case of Foreign Body in the Left Bronchus expelled after Five Weeks. (*Lancet*, August, p. 288.)

4987. Sawtell.—A Fatal Case of Foreign Body in the Right Bronchus. (*Lancet*, August, p. 325.)

Art. 4982. *Jacquemart on Calcareous Concretions in the Nasal Fossæ* (*Rhinoliths*).—Dr. Jacquemart relates an interesting case of the above rare affection. The patient, a man aged 41, suffered for twenty-one years from stoppage of the left side of his nose, with fœtid discharge of varying consistence, occasionally tinged with blood. For two years there had been bleeding from time to time, and for four or five months the nostril had been completely obstructed, and hæmorrhage had been more frequent. Pain was present, but was not a marked symptom. Rhinoscopic examination showed in the left nasal cavity a dirty grey tumour with uneven surface descending to its lower third. To the probe it was not quite hard, but like a soft substance hardened by desiccation. The slightest touch, which, however, demonstrated its mobility, gave rise to copious hæmorrhage. A diagnosis of carcinoma was made (in accordance with many previous opinions); and, as the patient refused any severe surgical operation, the author endeavoured to clear the left nostril with the galvanic loop. Half-a-dozen hard fragments, covered with a soft plaster, were then removed. The nasal cavity was rapidly cleared, leaving bleeding fungous surfaces on the septum and turbinated bodies. On breaking open the largest concretion (of the size of a hazel-nut) it was found to contain a fruit-stone covered with calcareous deposits, and was itself calcified. Around the central stone other concretions had formed, in the shape of arborescences like a branch of coral. The patient had no remembrance of having introduced a stone into his nose. Complete recovery ensued under galvano-caustic treatment of the granulations. Fortunately, there does not appear to have been any necrosis produced by the long sojourn of the foreign body.

4983. *Schmiegelow on Rhinoliths.*—In a paper read in the Laryngological Section of the International Medical Congress at Copenhagen (*Revue Mensuelle de Laryngologie, d'Otologie, et de Rhinologie*, Nov. 1, 1885), Dr. Schmiegelow, of that town, relates particulars of an interesting case of rhinolith under his care. The patient, a man aged 58, had suffered for eighteen years from fœtid purulent discharge from the left nostril, with complete obstruction on that side. About one inch deep in the left side of the nose the author found a hard dark substance occupying the whole of the inferior and a part of the middle meatus—in fact, embracing the inferior turbinated body like a fork. The rhinolith was removed in two sittings, being crushed with a strong pair of forceps. Afterwards the bone was felt denuded in several places, but these spots subsequently became covered, and complete recovery ensued. There was no nucleus to the stone. It had the usual composition. An interesting symptom from which the patient suffered was as follows. For five or six years, he said, that on getting hot he had perspired profusely on the left side of his head. This phenomenon had completely disappeared for four years before he was seen. The author attributes it to a reflex neurosis originating in the nose, but which ceased as soon as, from constant growth of the rhinolith, the pressure was sufficiently great to destroy the mucous membrane and nervous filaments.

4984. *Schrötter on Congenital Bony Occlusion of the Choanæ.*—Prof. Schrötter, of Vienna, relates a very interesting case of the above rare affection. The patient was a girl, aged 19, presenting the usual symptoms of nasal stenosis. Posterior rhinoscopy showed the choanæ occupied by greyish-yellow shining diaphragms, which on each side presented at the upper part a minute depression of the size of a pin's head. A probe introduced through the nose could be discerned in the mirror at several points. It was possible to transmit light through the membrane both from the front and from behind. Openings were made through both membranes by applying the galvanic cautery to the front; but, as the margins of the openings were found to present exposed bone, it was concluded that the obstructions were of bony character, and their further removal was accomplished by means of a fine guarded chisel introduced from the front. As a result, the middle turbinated body and the upper and middle meatus became visible from the back on both sides, also the superior turbinated body on the right side, although some portions of the obstructing diaphragms still remained. Nasal respiration became quite free; but the sense of smell, which had been completely absent, was only restored to a slight degree.

4985. *McBride on Some Local Causes of Fœtid Breath.*—The author (*Edin. Med. Jour.*, Jan. 1885) discusses three causes—chronic follicular tonsillitis, ozæna, and catarrh of the tongue. For the treatment of ozæna he recommends the use of an alkaline and antiseptic spray, immediately followed by one containing as much tincture of iodine as the patient can bear, which usually does not exceed five minims to the ounce. Speaking of catarrh of the tongue, the author comes to the conclusion (1) that fœtid breath, when due to dyspepsia, is caused by the accompanying catarrh of the tongue; and (2) that local treatment directed to the tongue is the best method of meeting this symptom, and may also influence favourably any coincident gastric disturbance. The treatment he recommends is the application of nitrate of silver dissolved in nitrous ether. Concentrated acetic acid, as used by Michel, may also be tried.

E. Cresswell Baber, M.B.

4986. *West on a Case of Foreign Body in the Left Bronchus expelled after five weeks.*—In the *Lancet*, August 1885, p. 288, Dr. Samuel West records the case of a boy, aged 11, who was running along the street with a small piece of brimstone in his mouth. He drew a sudden breath, and felt the brimstone slip down his throat. Little inconvenience was felt at the time, but he at once began to wheeze, and two hours later to cough. These symptoms increased on exertion. Fourteen days afterwards the boy's mother took him to a druggist, who gave him a purge, and afterwards inverted him, with a view to removing the foreign body, but without result. The boy was then taken to the hospital, and was carefully watched for a few days; and on the ninth day after admission, while running about the hospital, he felt his breath become suddenly short, and the brimstone came up into his mouth. It was an irregular wedge-shaped piece, about three-quarters of an inch long, and a quarter of an inch in thickness. It had remained in the left bronchus for nearly five weeks, and had produced no permanent effect on the lung.

4987. *Sawtell on a Fatal Case of Foreign Body in the Right Bronchus.*—At page 325 of the *Lancet*, for August 1885, Mr. T. H. Sawtell records a similar case, but with fatal results. A boy, aged eight months, was suddenly seized with dyspnœa; ten minutes afterwards, he was seen by the author. He was cyanosed and in great distress; the breathing was strident but regular. An emetic was given, followed by a hot bath, without relief. Two and a half hours after the outset of symptoms, tracheotomy was performed. Up to this time, all that could be diagnosed was a foreign body below the glottis. There was œdema over and below the right clavicle, and the child gradually exhibited the usual signs of death from asphyxia. After much difficulty a tube was inserted, and for an hour or so the child seemed better. The noisy breathing, however, continued, and in ten hours the child was dead. At the necropsy it was found that the right bronchus was occupied by an awn of straw, one inch and a quarter long. It was firmly wedged in the tube, the stiff sharp point having reached a secondary bronchus, while the blunt end appeared just above the junction of the primary tube with the lung. The lung itself was collapsed, but not absolutely.—[In the *Medical Digest* (section 637 : 5), a large series of similar cases are recorded, and during later years many more have appeared in the various journals, which will be noted in the forthcoming Appendix.—*Rep.*]

Richard Neale, M.D.

REVIEWS.

ARTICLE 4988.

The Insane in the United States and Canada. By D. HACK TUKE, M.D., LL.D. London : H. K. Lewis. 1885.

WE are informed in this book that Dr. Rush held that our ideas, whether original or acquired, produce a mental plethora which depletion by the pen or tongue can alone relieve. There is no fear of Dr. Hack Tuke suffering from plethora of this kind. No writer in the same field is able to keep pace with him in the number and variety of the books which he produces. The present work cannot fail to interest those in Europe who deal with the treatment of insanity, and it will, perhaps, be read with even more zest in America, for Dr. Hack Tuke's criticisms are made in such a fair and genial spirit that they are not at all likely to rouse the susceptibilities of our friends across the Atlantic. In Great Britain, writers generally claim for their asylums a superiority which will scarcely be admitted on all points. The doctrine of absolute non-restraint, which never commanded universal acceptance even in England, meets only with an acceptance more or less limited in other countries, and no foreign alienist is at all likely to try to gain the praise of his countrymen by pushing non-restraint up to the extreme limits of danger recognised by common sense. Dr. Hack Tuke himself wishes it to be distinctly understood that in no asylum does he judge of the patients from the total non-restraint point of view. For our part, we think it would be more correct if writers, instead of saying that 'the amount' of restraint is too great, would say that, in this or that asylum, they found patients restrained who did not require it. Restraint is sometimes necessary, though not often ; and the man who does not use it when required deserves as much blame as the man who errs on the other side. We believe it is quite true what the American physicians say, that English superintendents are sometimes kept from using mechanical restraint by the fear that it should be reported by the Commissioners in Lunacy or the Local Board that 'the amount' used is too great. On the other hand, all British physicians who have visited American asylums agree in stating that restraint is often used in the asylums of the New World, when it would be thought quite unnecessary in Great Britain ; and this is also the opinion of many distinguished physicians in America well acquainted with insanity. In fact, on visiting America about five years ago, we found them divided into the neurologists and the superintendents, who on the question of restraint made bitter war with one another.

Dr. Hack Tuke tells us that he has visited forty asylums on the American continent ; and, as the distances which separate these institutions are much greater than in our narrow island, this implies a great deal of travelling. Instead of summing up in favour of the asylums of his own land, Dr. Tuke philosophically observes that each has something to learn from the other. He thinks that the Americans have made great use of their inventive faculty in the good working of their institutions, that they have been wiser than ourselves in avoiding the construction of so many very large asylums, and that 'they have a greater proportion of medical men in most asylums in the States than obtains in England, and consequently the possibility, to say the least, of more individual interest in the patients and their treatment.' He approves of the more frequent practice of having married assistant medical officers, 'as tending to retain a better class of men, and to give greater confidence to the friends of patients, especially in the absence of the superintendent.' He observes that, if the American superintendents had pensions, they would be much better paid than those in Great Britain. It seems doubtful if the granting of pensions is such an unmixed benefit to those who give their attention to the study of insanity. It distinctly tends to favour the appointment of younger men over those who have gained both reputation and experience, from the fear that they may sooner come to claim a pension, so that in no profession or branch of the professions are good men shunted so early.

Dr. Hack Tuke thinks that 'in the main the Americans not only feed, but house and warm their patients better than we do, while individual comforts, likes, and dislikes receive rather more recognition and attention in their hospitals than they do in ours.' In a few asylums, he found a special pathologist, whose sole employment it was to take full advantage of the opportunities for scientific research which a large asylum affords, in studying the alterations found in the bodies of those who had died. We can confirm what he says in favour of the asylum in Toronto under the charge of Dr. Daniel Clark, and are pleased to learn that he found Dr. Workman, the Nestor of the profession in Canada, still busy writing and translating. Of the other asylums in Ontario, Dr. Tuke writes approvingly, but his criticisms fall very severely upon the asylums in Lower Canada, especially on those of Longue Pointe, near Montreal, and Beauport, near Quebec. On visiting the latter asylum we were told by the physician in a very polite manner that we could not see it, as the patients were at dinner. It was suggested that we might come back in an hour, which we did not do. Next day we were informed by a gentleman, whose acquaintance we had made on the voyage, a resident in Montreal, that, from facts which had come to his knowledge, he did not wonder that they were unwilling that it should be seen what food was given to the patients. We are not, therefore, surprised to learn from Dr. Hack Tuke that the dietary is too low. Though his account of what he witnessed in this asylum is unfavourable, it is much less so than the outspoken sentences which Dr. Bucknill bestows on the same establishment in his *Notes on Asylums for the Insane in America.* Let us hope that this difference indicates improvement made during the nine years, which separated the visits of these two well-known collaborators of the *Manual of Psychological Medicine.*

Though Dr. Tuke's criticisms were keenly resented by those in charge of the condemned institutions, they met with the approval of the Medico-Chirurgical Society of Montreal, and excited great attention in Canada. There is little doubt that good has come from them, and is still to come. It is to be regretted that Dr. Tuke did not give us an account of his visits to some of the excellent State training institutions for imbeciles in America, for we cannot believe that he neglected to visit some of them. Many physicians quite fit to inspect an asylum for the insane are incapable of making anything approaching a proper appreciation of a training school for idiots; but this remark assuredly does not apply to Dr. Hack Tuke.

We think the book would have been the better for an index. It is divided into five chapters, but the page on which each chapter begins is not indicated in the table of contents.

The first chapter is on the Early Lunacy Practice in America; the others deal with things as they are in the treatment and legislation for the insane in the States and Canada. In this book there is an agreeable variety of information and apposite remarks. Dr. Tuke shows all his usual skill as a ready writer. No doubt the task has been to him a pleasant and even an easy one; but an amount of laboriously acquired knowledge was needed before anyone could be fitted to begin to write such a book.

W. W. IRELAND. M.D.

ARTICLE 4989.

Manuel des Injections Souscutanées. BOURNEVILLE ET BRICON. Second edition. Paris: Librairie du Progrès Médical. 1885.

(*Manual of Subcutaneous Injections.* By BOURNEVILLE AND BRICON. Second edition.)

So many medicines can now be given subcutaneously, that a manual of this kind is wanted; and the fact that this is a second edition is an evidence of the use made of this method of treatment in France. There is a great deal of useful information in this little book, and it is difficult to find any substance which has been omitted. The arrangement is alphabetical, so that reference is very easy. Under the heading of the name of the material used, is to be found what has been learned of the action of the drugs administered subcutaneously, and the authors have put together a very large amount of information from other writers of almost every country.

In the introduction we find a list of solubilities, which might with advantage be extended, as it is certainly imperfect, and there is a very good chapter on instruments well illustrated; then a short account of the operation, and a still more valuable chapter on local accidents, taken essentially from Dr. Colombe's 'Inaugural Thesis.'

Among the recent additions to this work, which are numerous, we find the effect of subcutaneous injection of antipyrine, convallaria majalis, cucaine, nitro-glycerine, and salicylate of soda. This division will be read with interest.

The plan adopted in this manual is to give first a short account of when and by whom the substance was used hypodermically, then some account of the simplest forms of solution. This is followed by a full account of the physiological effects of the drug, and by another of the local effects which may be produced. Then comes a paragraph in which will be found an account of the class of cases in which the drug has been thus employed, with the names of authorities for its use.

The little manual is likely to prove very useful, as it contains a vast fund of information upon a subject which is not easy to find clearly detailed in ordinary works on therapeutics. And the subcutaneous injection of medicines and other materials has now become so common a means of rapid and effectual treatment that a handy and reliable guide, such as this work, will prove of service to those engaged in the scientific treatment of disease.

W. W. WAGSTAFFE.

ARTICLE 4990.

An Index of Surgery: being a Concise Classification of the Main Facts and Theories of Surgery for the Use of Senior Students and others. By C. B. KEETLEY, F.R.C.S., Senior Surgeon to the West London Hospital, Surgeon to the Surgical Aid Society. Third Edition. London: Smith, Elder, & Co. 1885.

THE fact of this work attaining its third edition in four years is the best evidence of its popularity and usefulness. It is, in fact, a small dictionary of surgery; and, though originally intended for students as a succinct compilation of accepted views and facts relating to surgery, and arranged alphabetically instead of in the usual order of text-books, it evidently is used by practitioners for reference. It therefore serves a purpose beyond that originally intended, which was rather that of notes for examination purposes.

This enlargement of scope and usefulness involves a careful parallel march with the progress of surgical knowledge, and it is chiefly with a view to inquiring into that we have examined the work. And the author is to be congratulated upon his success in this respect. Recent views and experiences are referred to, and the reader is reminded of what he may have read, or he is directed to sources from whence he may obtain fuller information. All this is admirably kept up to date, and candidates reading for surgical degrees will find such a book of great value in this respect.

But the work goes further than being a reference-index, for the explanation of the surgical conditions enumerated is briefly but clearly given, with the pathology and treatment of each. The language is generally that of notes, and, therefore, a knowledge of the subject is to a great extent assumed; but in many places the writing is clear and full where these requirements seem demanded.

There are some omissions, as might be expected from a work which has so large a scope, and which is limited to comparatively small compass; but it is difficult to find any fault on this score. And in an alphabetical arrangement much that appears to be absent under one heading may be found under another. 'Organisms in disease,' 'bacteria,' &c., are thus only to be found under the head of 'microscopic' organisms. This subject is well treated, and forms a good compendium of what is known of this rapidly progressing study. We do not find under any heading the comparatively common rupture of the plantaris tendon, nor the so-called lawn-tennis arm. Nor do we find any reference to acute necrosial fever, which demands serious attention, and may be so readily mistaken for other diseases. The existence of vaccino-syphilis seems in one place to be questioned, but referred to a foot-note elsewhere.

The remarks on treatment seem to us to be generally wanting in any reference to principles, consisting rather in an enumeration of materials, doses, special splints, and apparatus. In short notes, such as these essentially are, we should have preferred to see the principles of treatment enunciated first, and the materials used in carrying out those principles put afterwards. This would be of more value to both student and practitioner, and would lead him to sounder methods of treatment than a knowledge of special apparatus or empirical medicines.

Mr. Doran contributes a short appendix on the special surgery of the female internal generative organs, and in these eight pages will be found a very large amount of practical information. Mr. Lyons adds a few short notes on toothache; and Mr. Juler gives thirty-three pages on some of the more common affections of the eye and the treatment necessary for them. The plan of the author of the book is very well preserved by these contributors of the appendices.

A careful perusal of the work shows that a great deal of care and labour has been expended in its compilation. It is essentially a handy book of reference, and contains a great deal in a small compass. It would be difficult to find so much information in any five hundred pages; and, generally speaking, the information is very available, but a study of the arrangement of the work is necessary to ensure a knowledge of where some of its useful material can be found. The author is to be congratulated upon the production of an extremely useful compendium, which well merits its title as an Index of Surgery; and the publishers have produced a clearly printed book, which possesses margin enough for additional notes; a matter of importance in a work of this character. W. W. Wagstaffe.

Article 4991.

Movable Liver and Pendulous Abdomen in Women. (*Die Wanderleber und der Hängebauch der Frauen.*) By Dr. Landau, Teacher of Gynæcology, University of Berlin. With Twenty-three Woodcuts. Berlin: Hirschwald. 1885.

Dr. Landau has already earned a high reputation for his work on floating kidney in women, and this production, on a kindred topic, is of high merit and deserves, like the former, to be translated into English. The author has observed sixteen cases of movable liver and nearly fifty of falling of that body below its normal level. Dr. Landau believes that the displacement is due to an unnatural increase in the capacity of the abdominal cavity, without a corresponding increase in the bulk of its contents. The condition known as pendulous belly is the great cause of movable liver, for the reason above stated. When naturally strong and firm, the abdominal walls support the liver and the intestines; when weak and pendulous, the liver slides downwards and forwards, pressing unduly upon the intestines, so as to cause obscure pains, sometimes alleviated by drugs, and often cured, for obvious reasons, by a good abdominal belt. Dr. Landau, also, according to a theory accepted by many other writers, brings the conditions which form the title of his book under the category of hernia. The same theory is applied by him and by others to floating kidney and to uterine displacements. Dr. Landau collects many recorded cases of suspected movable liver, and shows that most of them were errors of diagnosis. He also cautions his readers against mistaking every thick-walled belly for true pendulous abdomen, and against the belief that every pendulous belly is thick-walled. Many corpulent females go about in perfect comfort, for their thick abdominal integuments with adipose layer complete, and their omenta loaded with fat, are supported by a muscular apparatus in perfect working order. A slight amount of loss of power in the abdominal muscles of a thin weak woman may, on the other hand, involve all the distressing phenomena of pendulous abdomen.

All the sixteen cases of movable liver observed by the author himself occurred in women who had born children, with one exception, where the patient was also a woman but childless. In this case, too, unlike the others, the abdomen was not pendulous. This displacement was attributed to frequent and violent sneezing. Alban Doran.

Article 4992.

Diseases of the Tongue. By Henry T. Butlin, F.R.C.S., Assistant Surgeon and Demonstrator of Practical Surgery and Diseases of the Larynx, St. Bartholomew's Hospital; late Erasmus Wilson Professor of Pathology at the Royal College of Surgeons. London: Cassell & Co., Limited.

This manual is peculiarly suited to its object, being written by a recognised authority, and published in a convenient and elegant form. Its author has long been known for his valuable contributions to the archives of London societies, and for his two monographs—one, chiefly pathological, on *Sarcoma and Carcinoma*; the second, more essentially clinical in character, on *Malignant Disease of the Larynx.* The manual under consideration, *Diseases of the Tongue*, is likewise chiefly confined to clinical and surgical details, minute pathology (which would have been out of place in a work of this class) being excluded. The author has rightly included full notices of the rarer affections of the tongue which occasionally puzzle the practitioner, such as abnormal length of the tongue, black tongue, wandering rash, and, above all, non-syphilitic ulcerations. We may single out chapter ix. as particularly useful in this respect. It treats of patches found on the tongue as the result of various causes and as the symptom of different diseases. The observations on 'smoker's patch' are of high interest. Speaking of a chapter on patches, we must note that the different heads of the subject of the manual are classified in accordance with clinical appearances, as 'discolorations,' 'indentations,' 'eruptions,' &c., so as to facilitate clinical research. We leave the reader to study for himself those portions of Mr. Butlin's work which treat of the more familiar diseases of the tongue, such as cancer and syphilis. Much space is devoted to the operative and therapeutic treatment of malignant disease.

Diseases of the Tongue is richly illustrated, chiefly by means of a very fine series of chromo-lithographs drawn and coloured by Mr. Godart and engraved by Mr. Burgess. These coloured plates are eight in number, each containing a representation of three diseased tongues—a liberal allowance, when we remember that the quality is as good as the quantity, and that the book is issued at a very moderate cost. Alban Doran.

Article 4993.

The Extra Pharmacopœia, with the additions introduced into the British Pharmacopœia of 1885. By William Martindale, F.C.S., and W. Wynn Westcott, M.B.Lond., Deputy Coroner for Central Middlesex. Fourth Edition. London: H. K. Lewis. 1885.

The author's preface to the fourth edition of this exceedingly valuable work will best serve to convey to the reader an idea of its vast value to every practitioner. 'After a lapse of eighteen years, a new *British Pharmacopœia* has appeared. The Medical Council, on whom rests the responsibility of publishing the official *Pharmacopœia*, engaged the most scientific experts in pharmacy, the three professors of the Pharmaceutical Society, to prepare this edition. They repudiated the claim of working medical pharmacists to have any voice in its production. We find that many of the drugs, chemicals, and preparations of former editions of the *Extra Pharmacopœia* have been embodied in the official work. We have endeavoured, therefore, in preparing this edition, to include, in an abbreviated form, all the additions and alterations which have been made in the new *Pharmacopœia*. We preface our work with a review, pointing out these alterations. Changes in nomenclature and other causes have compelled us to make a complete revision. We have added one-fourth more matter in as condensed a form as possible, so that the book may still be suitable for the pocket. We add a new feature—a secondary list of drugs. To these medical attention has been more or less directed, but they have not as yet come into general use. The medical references have been brought up to date.' To attempt to extract and abstract matters of interest from this work would be simply to transcribe its pages, for they are full of matter that is of the utmost value to prescriber and dispenser alike; and it is difficult which most to admire, the erudition of the pharmacist, or the research exhibited by Mr. W. Wynn Westcott, who has placed many valuable references at our disposal, a labour which the reviewer trusts has been somewhat lightened by the aid of the *Medical Digest*, although, if it be so, no allusion to the fact is made.

RICHARD NEALE, M.D.

ARTICLE 4994.

Von Ziemssen's Handbook of General Therapeutics. Vol. I. On the Dietary of the Sick and Dietetic Methods of Treatment. By Professor J. BAUER. The Koumiss Cure, by Dr. STANGE. Translated from the German by EDWARD F. WILLOUGHBY, M.B. Lond. London: Smith, Elder, & Co. 1885.

THIS volume is the first of seven, and contains an introductory chapter by Von Ziemssen, in which the general plan of the work is explained and justified. It is, he says, intended to be a retrospective review of the progress accomplished during the last forty years in the domain of therapeutics, taking this word in its broadest acceptation; and the first portion discussed has reference to the dietetic treatment of the sick. The physiology of the subject is thoroughly and exhaustively gone into, and the necessary data are given to enable the practitioner to avoid the 'jurare in verba magistri' by a comparison of means and results. Each section is contributed by a German authority, eminent in his own department of practice, and forms a work complete in itself. This method entails a certain want of homogeneity in the work as a whole, from the dissimilarity of individual chapters in length and the differences in the mode of treatment. Several series of valuable tables are given, first of the chemical composition of the various food-stuffs, and secondly of the results to the human economy of their administration in specified amounts, while ample scope for comparison is afforded in the numerous selections of diets in hospitals, barracks, prisons, &c., all over the Continent. The treatment of diseases where modifications in the ordinary diet are an essential feature, such as scurvy, gout, diabetes mellitus, &c., is dealt with separately; and, although these chapters contain nothing particularly new, there is a careful summary of the different schemes of dietetic management, so that, even if the reader meets with nothing more than can be learned elsewhere, he has at any rate the advantages of the various plans being placed clearly and succinctly before him.

The 'dry cure' and the 'koumiss cure' are awarded a disproportionate space in the book, and one which bears no relation to their intrinsic importance. With regard to the latter, opinions seem very much divided, not only as to its merits as a therapeutic agent, but as to the particular maladies in which, if any, good results are to be hoped for. From the stress laid on the necessity of undergoing the treatment on the spot, viz., on the Russian steppes, it is possible that the air and surroundings may not be altogether foreign to whatever good results have been recorded. The quality of the English leaves little or nothing to be desired, and the translator is to be congratulated on his success in this respect.

ALFRED S. GUBB.

ARTICLE 4995.

Notes on Materia Medica and Pharmacy. By FREDERICK T. ROBERTS, M.D., F.R.C.P., Examiner in Materia Medica and Pharmacy in the University of London, &c. London: H. K. Lewis. 1885.

THIS neatly arranged little handbook is designed by the author to obviate the necessity for lectures on the more mechanical parts of what he is pleased to call 'pharmacology,' which can only be satisfactorily taught by practical demonstration. Exception must be taken to the use of the word 'pharmacology' as a synonym of Materia Medica. Its employment is the more surprising on the part of Dr. Roberts, seeing that in the section of Materia Medica and Therapeutics at the International Medical Congress, in August 1881, of which he was one of the secretaries, the following carefully defined meaning was given to the word. 'It now signifies the science of the action of remedies, and it accordingly deals with the modifications produced in healthy tissues by the operation of substances capable of producing modification. The methods of investigation which it requires are totally distinct from those followed in the study either of pharmacy or pharmacognosy. Pharmacology constitutes the chief basis for the application of remedies in disease. It is allied to therapeutics, and constitutes the most important connecting link between Materia Medica and the art of medicine.'

It is easy to perceive the hand of the teacher in the carefully arranged tables of those subjects which ought to be impressed on the student's mind, and the more important features of which are rendered salient by the judicious employment of assorted type. The author has evidently availed himself of his exceptional facilities, as an examiner and as a lecturer, for knowing where students are generally deficient, to produce, in small compass, a book which should, with a little application on the students' part, go far to supply their wants.

ALFRED S. GUBB.

ARTICLE 4996.

Atlas of the Cutaneous Nerve-Supply of the Human Body. By JACOB HEIBERG, M.D. Translated and edited, with Annotations, by W. W. WAGSTAFFE, B.A., F.R.C.S. London: Baillière, Tindal, & Cox. 1885.

MR. WAGSTAFFE has rendered a service to the profession in this country by placing before it a translation of Professor Heiberg's Atlas of the Cutaneous Nerve Territories. The book is as valuable as it is unpretentious, and its main distinctive feature, the distinction of the nerve-areas by means of colour, offers advantages that the student and practitioner will not fail to appreciate. We have now not only a thoroughly trustworthy 'chart' of the neurology of the skin, broadly and accurately planned, but one which allows a more speedy reference and leaves a more lasting impression upon the memory than anything of the kind hitherto accessible.

The range of application of such a work may best be conveyed in the words of the Editor, whose reputation as an anatomist lends especial weight to his recommendation : 'In the out-patient room and wards the usefulness of such diagrams in a portable form will be recognised, and it is especially here that this want has been felt for teachers and students alike. There are few diseases involving the skin where pathology may not have some light thrown upon it by a knowledge of the local nerve distribution ; and this applies as much to eruptive and inflammatory diseases as to those in which pain is the predominant symptom ; and a knowledge of the pathology of such lesions is the most important stepping-stone to successful treatment. Even in injuries involving the skin, the local nerve-supply may be a guide to treatment, and the clinical teacher will make use of such knowledge in directing his class.' For the anatomical lecturer or demonstrator the utility of an application of Professor Heiberg's plan of diagrammatic illustration requires no comment.

The remarks appended by the author to each plate are clear and brief, and their value has been increased by the supplementary notes of the translator as well as by the addition of a list of synonyms by which is removed all possibility of confusion in nomenclature. The editing is all that could be desired, and the style and aspect of the volume are worthy of the matter.

ARTICLE 4997.

Anthropoid Apes. By ROBERT HARTMANN, Professor in the University of Berlin. With sixty-three Illustrations. (International Scientific Series.) London : Kegan Paul, Trench, & Co.

PROFESSOR HARTMANN'S work forms an useful summary of contemporaneous knowledge on the anatomy, affinities, and habits of the man-like apes. It is written in a sufficiently popular form to be readable either by the practitioner who is not a zoologist, or by the intelligent member of the public outside the world of science. The more essentially anatomical portions of the work are chiefly confined to the bones, the brain, and the muscles, of the anthropoid apes. There is an excellent table of references at the end of the work, where the writings of the chief authorities on the subject are quoted.

The different species of anthropoid apes form the subject of the essentially zoological section of Professor Hartmann's treatise. The psychology of the ape is discussed with great judgment. The ape has a mind, certainly, a mind distinct from and inferior to that of man, but perfect in itself, and neither morbid nor infantile. Virchow has already insisted upon this great fact. A microcephalic idiot in no way resembles an ape; he has often exalted ideas and taste for abstract enjoyments never seen in the lower animals. Instinctive psychical activity, h e great faculty of doing what he has not been taught to do, and of applying accurate though superficial powers of observation to purposes of defence, concealment, revenge, and the procuring of food, is a steady and well-developed function in the ape, whilst the idiot is worse off than the sane man in this respect. Nor is the little brain of an idiot in any way like that of the ape, excepting that, in comparison with the encephalon of a normal human subject, it is small. An ape differs greatly from a child, to which it has been too often compared. A child is remarkably deficient in instinct ; he can neither feed himself, wash himself, nor walk without education ; on arrival at adolescence, the sexual faculties are imperfectly understood as far as instinct can guide him. An ape, taken from its parents when an infant, and placed in captivity, will soon show how it differs from a child in its superior instinctive powers, as well as in a total absence of the thirst for novelty and the love of some kind of information so marked in childhood. Nor can an ape be considered as normally comparable to a human fool. He certainly makes the best use of his comparatively limited mental capacity, and is as abstemious as most animals ; and his apparently senseless and long-lived hate for certain persons or objects is probably due not to folly, but to fear or suspicion.

Professor Hartmann denies that man can have descended from any of the existing anthropoid apes, or that a fossil connecting link has been discovered, or that there is any reliable evidence that certain flint-heads that have been discovered were fashioned not by human hands, but by the extinct *Dryopithecus.* He believes, on the other hand, that the link may yet be discovered, not by brilliant argument, but by the strenuous labour of future times, which 'need not disturb any religious and political convictions.'

ALBAN DORAN.

NOTES ON BOOKS.

ARTICLE 4998.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Vol. VI. Heastie—Insfeldt. Pp. 1051. Washington : Government Printing Office. 1885.

WE have reason to be profoundly grateful to the American Government—always much more generous than our own where matters of printing are concerned—for defraying the expenses of, and affording Dr. Billings facilities for, the colossal Index Catalogue of the Surgeon-General's Library, of which the sixth instalment is now before us. It is beyond doubt that the library under Dr. Billings' care is the finest and largest collection of books on medical subjects in the world. Indeed, the enthusiastic compiler, in his zeal for omitting and overlooking nothing, runs the risk of plunging students into unfathomable despair when, desiring to read up some given subject, they turn to the catalogue for reference to it, and find page after page of books named that, if they want to be quite sure they have thoroughly mastered the literature of the question, they cannot safely ignore. The four titles in the book which monopolise the largest amount of space in this sixth volume are Hernia (85 pages), Hospitals (97 pages), Hygiene (117 pages), and Insanity (158 pages). Of course, these are all subdivided into many sections ; but the number of pages which their literature covers serves to show that of the making of medical books and pamphlets, at least, there is no end. Dr. Billings, having now got through about a third of the alphabet, reminds his superior officer that in the six volumes published he has chronicled 58,886 author-titles, 33,265 volumes, and 47,325 pamphlets. Under the head of subjects he has referred to 64,142 book-titles and 219,154 journal articles. It would be difficult to speak too highly of this wonderful catalogue. It is a marvel of accuracy, order, and method. It is, moreover, beautifully printed, and is arranged in a way which makes reference to any part of it extremely easy and rapid.

Article 4999.

Diseases of the Larynx. By Dr. J. Gottstein, Lecturer at the University of Breslau. Translated and added to by P. M'Bride, M.D., F.R.C.P.E., &c. Edinburgh and London: W. & A. K. Johnson.

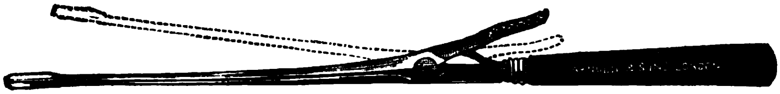
This is a translation from the German edition of 1883, and the translator has not only added an appendix on laryngeal innervation and on Charcot's laryngeal vertigo, but has endeavoured to repair any omissions on the part of the author throughout the book. His conversion of the metric system into English measure is done in a very perfunctory manner; in some instances he has succeeded in rendering his prescriptions almost unintelligible, so far as the doses are concerned, and in others he has given up the attempt in despair, and left the reader to draw what conclusion he can from '·015 of 15·43 grains.' The book is clearly written, and woodcuts are given of most of the diseased conditions as seen by the laryngoscope. Alfred S. Gubb.

NEW INVENTIONS.

Article 5000.

THE SIMPLEX SPECULUM FORCEPS.

Messrs. Arnold & Sons, of Smithfield, London, have made for Dr. Duke, of Dublin, a 'Simplex Speculum Forceps,' which will be found a decided improvement on the old form, requiring as it did the operator's attention all the time while in use, in order to keep the instrument closed, and grasp the wadding or sponge, and which besides obstructing the view was very difficult to disengage from the saturated wadding after use.



The new form of forceps, acting almost automatically, requires no attention during use, and, having a smooth bite, the saturated wadding can be easily disengaged by slight pressure of the finger acting on the spring, the old form of scissors-like handle being entirely done away with. The woodcut gives a faithful representation of the 'Simplex Speculum Forceps.'

A Sphygmographic Slip-Holder.—In the *Brit. Med. Jour.*, October 1885, p. 680, Dr. Richard Neale writes that he has instructed Messrs. Krohne and Sesemann, of Duke Street, to make for him a frame capable of holding twelve slips for the sphygmograph. By this means they can be simultaneously smoked, and then suspended behind a desk or door, or some convenient place, in the consulting room, ready for use, and to fill up the slip-case as needed.

NEW PREPARATIONS.

Article 5001.

COCOA.

Our attention has been called to a carefully prepared soluble cocoa manufactured by Mr. A. T. Assafrey, of Glasgow, which is said to be extensively patronised by the profession north of the Tweed. This cocoa is easily prepared for use, requiring only to be mixed with boiling water, with the addition of sugar to taste. It is very delicate in flavour, and possesses the true taste of the cocoa bean. When made with boiling milk instead of water, an infusion is obtained equal to the finest chocolates, without the heavy fatty constituents generally present in them, a portion of the cocoa butter being extracted in the process of manufacture. The analysis of Dr. Wallace, analyst to the city of Glasgow (which agrees with our own), shows this preparation to be a highly concentrated form of cocoa quite free from any adulterating material, and which may be safely recommended as a valuable drink for persons of delicate digestion. It is sent out in ¼, ½, and 1 lb. tins, and, as a proof of the care exercised in putting it up, is packed in bags of a specially prepared paper before being placed in the tin canisters, so that the contact with the metal may not affect it in any way.

Article 5002.

MILK-SALT LOZENGES.

Service's milk-salt lozenges afford a simple and agreeable mode of administering phosphate and carbonate of lime to growing children. Most sweets are curiously deficient in tissue-forming constituents; and, knowing the avidity with which they are devoured by children, it occurred to Messrs. Service & Co., of Glasgow, that they might be utilised for giving some of the inorganic materials which enter so largely into the composition of bone. The difficulty was to preserve the appearance, and, above all, the taste, of a sweetmeat; but this has at last been overcome, and the result is in every way satisfactory. For growing children, and especially those suffering from a predisposition to rickets or tuberculosis, this agreeable mode of administering a valuable remedy will prove a boon. Phosphate of lime has little or no toxic action, and the number of doses taken in the course of the day need not be very strictly limited.

Article 5003.

MUSTARDYNE.

Mustardyne (W. Clarke, 62 Holborn Viaduct), may be described as a good stomachic and stimulator of the salivary and gastric secretions. It is much more palatable than ordinary mustard, and will be a great favourite eaten with fish, game, or cold meat of any kind. It is always ready for use, and there being no waste it is economical, a point of no small importance.

ARTICLE 5004.

KHOOSH TONIC BITTERS.

THE Khoosh Tonic Bitters are now largely used as stimulants to the mucous membrane of the stomach, and with the view of promoting appetite and assisting digestion. It is alleged of them that they increase the biliary secretion, and act as mild laxatives. They are largely used in India; a few drops in a glass of water before each meal being the usual dose. Taken with sherry, they form a palatable mixture.

ARTICLE 5005.

BYNIN.

'BYNIN' is a new preparation recently introduced for the administration of malt in a liquid form. Its great use as a therapeutical agent is that it converts starch into sugar, a property which is shared with it by the saliva. It is a well-known fact that many of the preparations of malt used both here and on the Continent are prepared at too high a temperature, so that the activity of the ferment becomes greatly impaired, if not absolutely lost. Messrs. Allen & Hanburys point out that the new liquid malt is very palatable, and that it possesses in perfection the nutritive and peptic properties on which so much depends. We have no doubt that it will be largely used, and will receive a careful trial.

ARTICLE 5006.

HYDROLEINE SOAP-POWDER.

THE new hydroleine hydrated soap-powder is of considerable value for cleansing purposes, and is well adaped for use in the laundry. It dissolves readily, forming a solution which lathers readily. It is useful for washing floors, paint, tiles, marble, glass, and delicate articles, where the use of soap would hardly be admissible. For horses, dogs, sheep, and other animals it is an excellent application, keeping them clean without trouble. An analogous preparation is the hydroleine hydrated carbolised soap-powder, which is sold at a very moderate price, and is a powerful disinfectant. There are other powders intended for cleansing and reviving carpets, and for washing sponges and brushes. We have tried them all, and have no hesitation in saying that they are most efficacious. These hydroleine compounds are thoroughly reliable, and will come speedily into general use. They are prepared by Messrs. F. J. Harrison & Co., Limited, Leicester.

ARTICLE 5007.

THE PHENYLE DISINFECTANTS.

LITTLE'S soluble phenyle is valuable as a deodoriser, antiseptic, and disinfectant. It has a great advantage over carbolic acid and its preparations, in not being poisonous. It mixes with cold water in all proportions, and, if well diluted, will not injure the texture of even the most delicate fabrics. It is of considerable utility, and is likely to come into general use. It is prepared by Messrs. Morris, Little, & Co., Doncaster. The sanitary toilette-soap issued by the same firm is worthy of notice.

ARTICLE 5008.

ABSOLUTE IODOFORM.

WE have received from Messrs. Zimmerman, of Mincing Lane, specimens of iodoform prepared and purified by electrolysis, which are certainly a great advance on anything hitherto brought to our notice. Most specimens of iodoform are composed of very minute angular or acicular crystals, which, when applied to a healing sore, do much harm by the discomfort and irritation to which they give rise. The absolute iodoform is free from this objection, whilst the powdered specimen is of such delicacy and purity that it may be dusted over any surface, without the slightest fear of any untoward complication arising. A distinct advance has been made in the mode of preparation of a valuable curative agent.

MISCELLANY.

A FRENCH translation of Dr. W. W. Ireland's 'Blot upon the Brain,' reviewed in the LONDON MEDICAL RECORD for October 15, is in preparation. Professor Ball, the well-known alienist physician of Paris, has promised to write a preface for it.

VIGIER ON THE ODOUR OF POTASSIUM SULPHIDE LOTION.—In the *Gaz. Hebdomadaire*, M. Vigier states that the disgusting odour like rotten eggs, which characterises a lotion of potassium sulphide, may be easily overcome by adding tincture of benzoin in the same proportion as the sulphide employed.

VACCINATION SHIELDS.—The Medical Officer of the Local Government Board has issued a note from the office of the National Vaccine Establishment to the effect that he occasionally hears of cases of erysipelas following vaccination, and traceable to the use of old and dirty 'vaccination shields.' He points out that if in any case, as where a dress is worn dyed with a possibly irritative dye, a vaccinator thinks some means of 'protection' to a vaccinated arm to be desirable, he had best define the material and the manner of application of such appliance as he judges to be wanted in the particular case; and it appears to the medical officer important that every such appliance should be of a kind to be destroyed and replaced whenever it becomes soiled; and particularly that it should not be of a kind likely to be kept for subsequent use. Dr. Buchanan would, therefore, urge on vaccinators to discourage the use of the so-called 'vaccination shields.'

DETECTION OF THE OÏDIUM ALBICANS.—According to Dr. Kehler (*Deutsche Med. Wochensch.*), the *oïdium albicans*, the fungus of thrush, can be detected in the air of dwelling and sleeping-rooms, and even of workshops, by exposing solutions of starch dextrin, cane or milk-sugar, or milk itself. The child's mouth is usually infected from the teat or tubing of the bottle, but he believes that in 10 per cent. of the cases occurring in the first week of life, from the entrance of the vaginal mucus into the mouth during birth. Dr. Kehler maintains that chlorate of potash and borax actually favour the development of the oidium, though they may exert a favourable action of the ulcerated mucous membrane; but boric, phosphoric, nitric, hydrochloric, sulphuric, benzoic, acetic, and salicylic acids and alcohol arrest it. [He does not mention nitrate of silver. We have employed no other local treatment for many years, finding a single application of a pretty strong solution by a camel's hair brush suffice for its instant and complete destruction.—*Rep.*]

ERRATUM.

WE regret that the well-known name of Professor R. J. Levis was printed as Dr. R. T. Lewis, in the description of his new metallic splints at p. 451 of the LONDON MEDICAL RECORD of October 15. Professor Levis's name, however, is so familiar to the surgical world that we make no manner of doubt his invention has been ascribed to its rightful originator,

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A Perfectly Pure Brand of the most

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'It is perfectly free from everything representing fusil oil . . . a most wholesome spirit.'—Prof. Wanklyn.

'The samples submitted to the writer, taken from stock, have been subjected to the most careful tests by experts and lead to the conclusion that the spirit is up to the highest standard of quality.'—*London Medical Record.*

'This spirit possesses a fine aroma, and is characterised by remarkable mellowness and delicacy of flavour.'—Dr. Hassall.

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21s. per Gall.; 42s. per Case of 1 Doz. Bottles.

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(28 milig. of arseniate of soda per litre)
HALF A GLASS TO THREE GLASSES PER DAY

A Regenerator for Weakly Children. — General debility — Lymphatism; affections of the Skin and Respiratory Organs, — Diabetes. — Rheumatism, and Intermittent Fevers.

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BINAURAL STETHOSCOPE.

Sole Makers—Ferris & Co., Bristol.

UNDERSTANDING that a large number of BINAURAL STETHOSCOPES are being sold in London and elsewhere as the instrument designed by and recently improved by Dr. SPENCER, of Clifton, we beg to state that the only Stethoscopes which have Dr. SPENCER'S direct approval, as embodying his most recent designs, are made solely by us.

We append a letter from Dr. SPENCER to this effect.

Great accuracy in construction and attention to several special details are necessary in order to secure the perfect acoustic results which Dr. SPENCER justly claims for his instrument; and every instrument supplied by us is an exact copy of the STETHOSCOPE which we made for Dr. SPENCER, and which he now uses.

We are the only authorised Makers of Dr. SPENCER'S COMPOUND BINAURAL STETHOSCOPE.

5, LANSDOWN PLACE, CLIFTON,
October 29, 1885.

MESSRS. FERRIS & CO.
DEAR SIRS,

The latest improvements in my COMPOUND BINAURAL STETHOSCOPE—improvements which I believe make it now a nearly perfect acoustic instrument—have been carried out, under my direct supervision, by you.

The Stethoscope you now make is the only one which has received my approval, and combines, in the details of its construction, all my designs.

The new Stethoscope you made for me, within the past six weeks, leaves nothing to be desired in respect of acoustic results, or of workmanship and finish.

Yours faithfully,
WM. H. SPENCER, M.D.

Dr. SPENCER'S STETHOSCOPE sent post free, on receipt of Postal Order, for 16s.

Ferris, Boorne, Townsend, and Boucher,

Wholesale and Export Chemists and Druggists,

SURGICAL INSTRUMENT MAKERS,

BRISTOL.

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